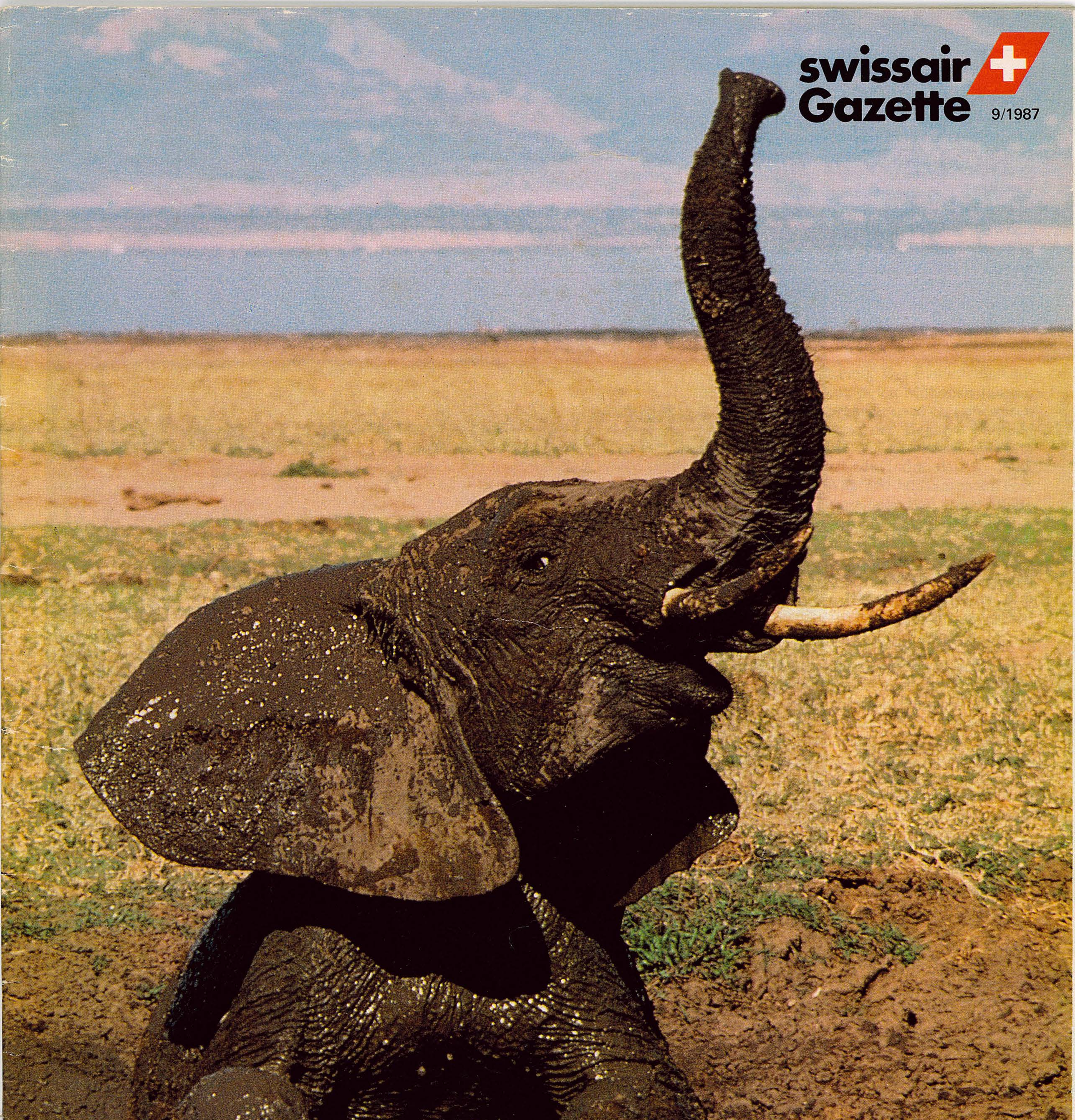
swissair Gazette

9/1987



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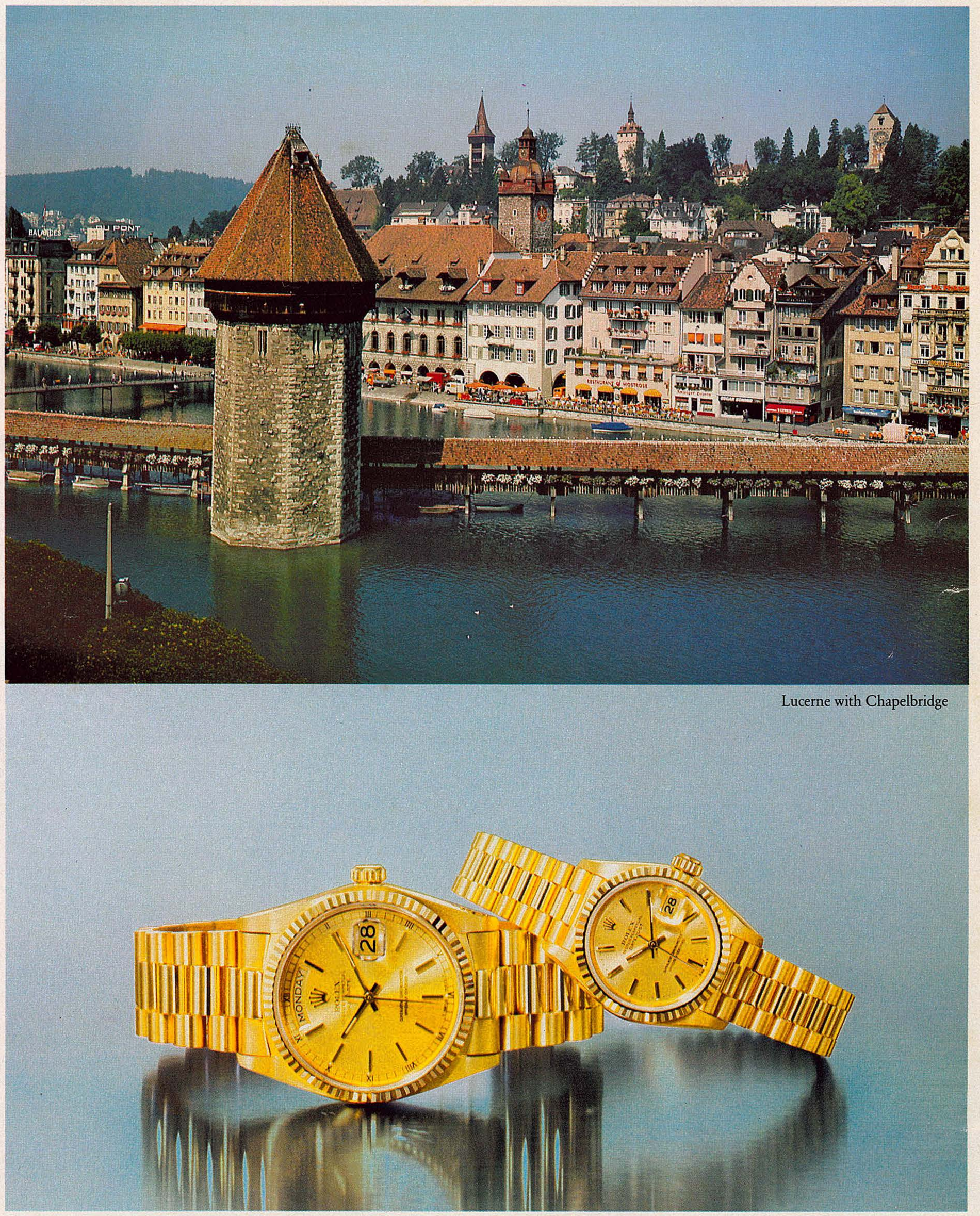

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B

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St. Gall St. Moritz Davos
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BUCHERER

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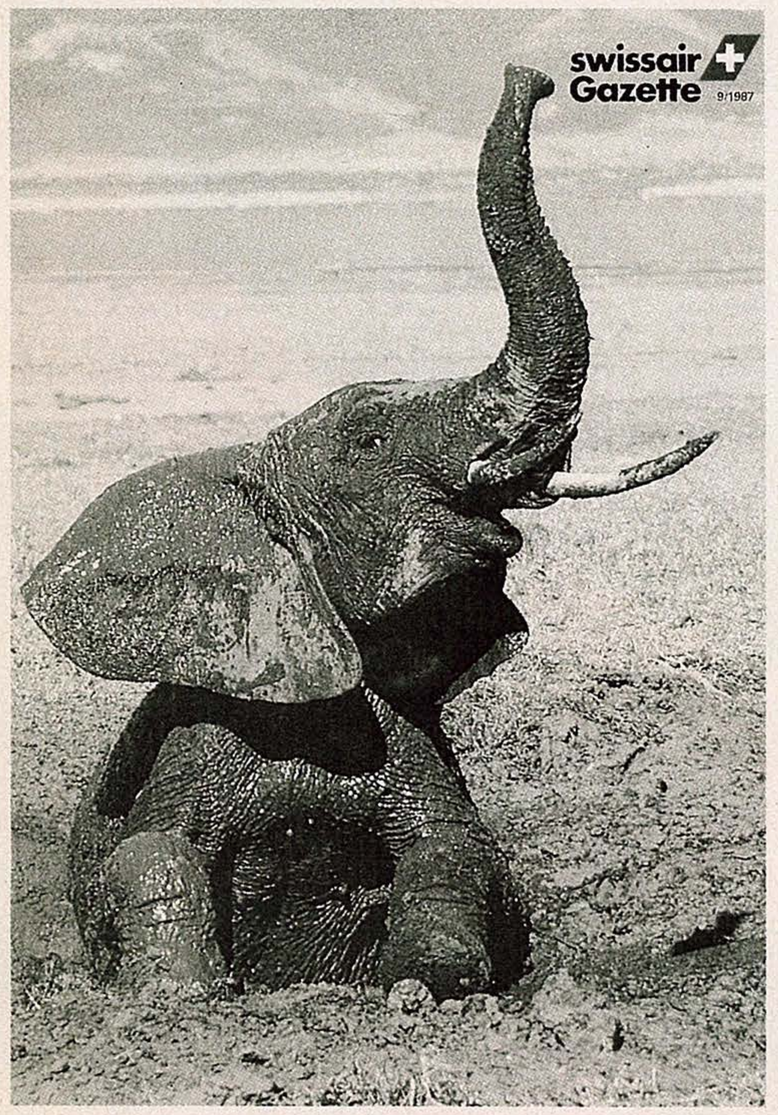

A young elephant obviously enjoying its daily mud bath. The primary purpose of the mud bath is to cover the body with a protective film that helps to keep off stinging and biting parasites. (Photo Reinhard Künkel)

swissair Gazette

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THIS MONTH'S ISSUE

Asian legends and scientific theory are in agreement that the elephant played a certain part in creating a world fit for man to live in. In the Miocene, many millions of years ago, its ancestors cleared the dense forests of East Africa and thus forced the local fauna to adapt to new conditions. This change also affected the forerunners of man. The giant among land animals was well disposed to humans over many thousands of years. It is not by chance that the elephant deity Airavata embodies the clouds, lightning, thunder and rain which the storm-god Indra invokes to initiate a new season of growth. The elephant was captured, tamed and trained by man for millennia. It helped to build his towns and temples, it carried him to the hunt and to war, it stimulated his thinking and his art. Yet the elephant remained true to itself. Man never succeeded, by selective breeding, in adapting it entirely to human needs and turning it into a domestic animal. The elephant is now vanishing from the face of the earth. In Asia the wild elephants' numbers have fallen to some 35 000. In the last twenty years Kenya, for example, has lost four out of five of its elephants. It may even be that the last elephant that will ever live on earth has already been born.

Asiatische Legenden und die wissenschaftliche Theorie sind sich einig: Der Elefant schuf mit an einer menschenwürdigen Welt. Im Zeitalter des Miozän, vor vielen Millionen Jahren, rodeten seine Vorfahren die dichten Wälder Ostafrikas und zwangen so allen Lebewesen neue Existenzbedingungen auf, so auch dem Menschen. Ihm war der Tierriese während Jahrtausenden wohlgesinnt. Nicht von ungefähr verkörpert der Götterelefant Airavata Gewitterwolken, Blitze, das Grollen des Donners und den Regen, die Indra, der Gewittergott, heraufbeschwört, um eine neue Fruchtfolge einzuleiten. Während Jahrtausenden liess sich der Elefant vom Menschen einfangen und abrichten. Er fronte beim Bau seiner Städte und Tempel, er trug ihn auf die Jagd und in den Krieg, er regte sein Denken an und seine Künste. Doch der Elefant blieb sich selber treu. Es gelang dem Menschen nie, ihn durch Zuchtwahl den menschlichen Bedürfnissen ganz anzupassen und zum Haustier zu machen. Jetzt verschwindet der Elefant von der Erde. In Asien sind die Bestände an Wildelefanten auf 35 000 Tiere zusammengebrochen. In den letzten zwanzig Jahren sind in Kenia zum Beispiel von fünf Elefanten vier verschwunden. Vielleicht ist der letzte Elefant, der je auf Erden leben wird, heute schon geboren.

Les légendes asiatiques et la théorie scientifique sont en accord: l'éléphant a effectivement contribué à la formation d'un environnement favorable à la présence humaine. Pendant le miocène, en effet, voici des millions d'années, les ancêtres de notre pachyderme ont défriché les épaisses forêts d'Afrique orientale, et ont ainsi obligé tous les êtres vivants à s'adapter à de nouvelles conditions d'existence – un changement qui a également influencé les ancêtres de l'homme. Au cours des millénaires, l'énorme animal est resté bien intentionné à notre égard. Ce n'est pas un hasard si le dieu éléphant Airavata symbolise les nuages orageux, les éclairs, le tonnerre et la pluie qu'Indra, dieu de l'orage, invoque pour commencer une nouvelle période de fécondité. Cela fait d'innombrables siècles que l'éléphant se laisse capturer, apprivoiser et dresser par l'homme. Il nous a prêté sa force pour construire nos cités et nos temples, son dos pour nous porter à la chasse et à la guerre, et son intelligence pour animer nos jeux du cirque. Pourtant, l'éléphant est toujours resté fidèle à lui-même: nous n'avons jamais réussi à en faire un animal domestique, ni à l'adapter complètement à nos besoins par sélection. De nos jours, les éléphants sont en train de disparaître. En Asie, l'effectif d'éléphants sauvages s'est réduit à environ 35 000. Au cours des vingt dernières années, le Kenya, par exemple, a perdu quatre sur cinq éléphants. Il est possible qu'il soit déjà né, le dernier éléphant que portera notre planète.

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Come to flavor

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Avec deux classes, vous n'avez qu'une alternative. Avec trois classes, vous avez le choix.

Sur les lignes européennes, la plupart des compagnies aériennes ne vous proposent plus que deux perspectives. Vous asseoir à l'avant. Ou à l'arrière. Où est le juste milieu? Chez Swissair, en revanche, vous avez trois classes au choix: luxueuse First Class, avantageuse Economy Class et, entre les deux, une Business Class où les hommes d'affaires sont entre eux. Quant à l'embarras du choix, il n'existe pas: dans chacune de ces trois classes, nous faisons l'impossible pour nous classer parmi les meilleurs. Pas seulement sur long courriers, mais aussi sur toutes nos dessertes européennes.

●

Vous cherchez la carte de crédit idéale pour les voyages aériens – celle qui vous permet de tout régler dans le monde entier, du billet d'avion aux frais d'hôtel en passant par la voiture de location? Dans ce cas, il vous faut la carte AirPlus. Swissair ainsi que douze autres compagnies aériennes se feront un plaisir de vous la procurer.

Two classes are an alternative. Three classes are a choise.

And a choice is a luxury. Especially today, when practically every major airline has cut back its service to just two classes on European routes. In contrast, Swissair continues to offer a luxurious First Class, comfortable Business Class and reasonably-priced Economy Class on all its aircraft. Not only long distance, but also throughout Europe. So if you're looking for an airline that lets you fly just the way you want, with three classes on every flight the choice is obvious.

●

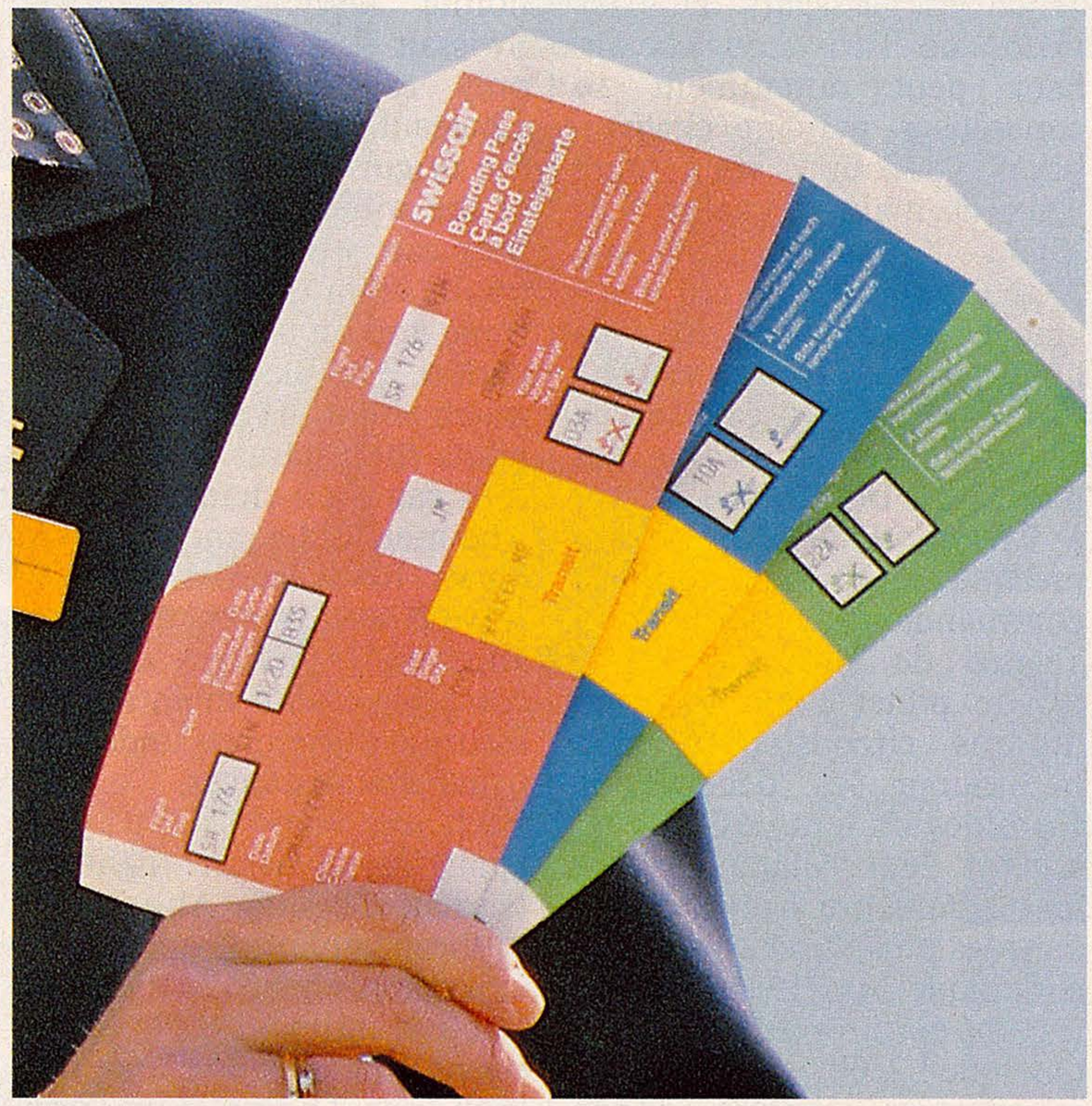
The name of the charge card to which you can debit your entire trip – everything from the airline ticket to the hotel and rental car – is AirPlus. It is issued by Swissair and twelve other airlines.

Zwei Klassen sind eine Alternative. Drei Klassen sind eine Auswahl.

Fast alle Fluggesellschaften bieten Ihnen auf Europastrecken nur noch zwei Möglichkeiten: vorne sitzen oder hinten sitzen. Wo bleibt da der goldene Mittelweg? Bei der Swissair dagegen haben Sie eine Auswahl von drei Klassen: die luxuriöse First Class, die preisgünstige Economy Class und zwischendrin die Klasse, in der Geschäftsleute unter sich sind, die Business Class. Und damit die Wahl nie zur Qual wird: In jeder der drei Klassen bemühen wir uns, der Klassenbeste zu sein. Nicht nur auf Langstrecken, selbst auf unseren Flügen in Europa.

●

Suchen Sie die Kreditkarte, der Sie Ihre ganze Flugreise – also vom Flugticket über Hotelspesen bis zum Mietwagen – weltweit belasten können? Sie heisst AirPlus und wird von der Swissair und zwölf weiteren Fluggesellschaften herausgegeben.



Due classi sono un'alternativa, tre classi, una scelta.

E scegliere è un lusso. Specialmente oggi che quasi tutte le grandi compagnie aeree hanno ridotto il servizio a due sole classi sulle rotte europee. Al contrario, Swissair continua ad offrire su tutti i propri aerei, la lussuosa First Class, la confortevole Business e la conveniente Economy. Non soltanto sui voli intercontinentali, ma anche su quelli europei. Così, se cercate una compagnia aerea che vi permetta di volare come voi preferite, la scelta è ovvia...

●

E, se state cercando anche una carta di credito che vi sollevi dal peso del viaggio in tutto il mondo, dal biglietto, all'albergo, al noleggio dell'auto, allora state cercando AirPlus. La carta di credito AirPlus viene emessa dalla Swissair e da altre 12 compagnie aeree.

swissair

Welche Swissair-Ausbildung macht sogar ausserhalb des Flugwesens Schule?

Die Ausbildung des Kabinenpersonals. Der Ruf dieser Schulung zieht immer weitere Kreise. Jetzt haben auch Verkehrsvereine aus Deutschland, Österreich und der Schweiz und neuerdings sogar Spitäler die Swissair eingeladen, ihr Wissen weiterzugeben. Da werden also neuerdings Qualitätsmassstäbe buchstäblich aus der Luft gegriffen. Via Swissair.

Das Swissair-Kabinenpersonal lernt nicht nur, fachgerecht zu servieren und etwa vor dem Gast das Chateaubriand zu tranchieren. Swissair Flight Attendants kennen Herkunftsgebiet und Charakter des Weines, den sie gerade ausschenken. Auch über die überflogenen und angeflogenen Länder und ihre Sitten wissen sie Bescheid. Das Flugzeug kennen sie fast so gut wie der Pilot. Im Bedarfsfall verstehen sie gar ein Baby zu wickeln. Und sowohl Damen als auch Herren haben gelernt, selbst unter extremen klimatischen und sonstigen Belastungen gepflegt zu erscheinen und ihre Ausstrahlung zu bewahren.

Jährlich melden sich bei der Swissair gegen 2500 Personen für die Ausbildung zum Flight Attendant. Etwa 40% davon werden zur eingehenden Prüfung eingeladen, und 200 bis 250 junge Leute werden jedes Jahr ausgebildet. Der theoretische Teil dauert fünf strenge Wochen, gefolgt von 3 Monaten Praxis im Flugzeug (mit Begleitperson), der Diplomprüfung und regelmässigen Weiterbildungskursen. Kein Wunder, dass die Swissair Flight Attendants jedenfalls in der Luft fast nichts erschüttern kann. Dafür haben sie zuviel gelernt über alle erdenklichen und auch heiklen Situationen an Bord. Und wie man ihnen charmant die Spitze nimmt. Das darf ruhig Schule machen.

Quelle est la formation Swissair qui fait école même en dehors de l'aéronautique?

Celle du personnel de cabine qui suscite un intérêt grandissant dans les milieux les plus divers. Des offices de tourisme d'Allemagne, d'Autriche et de Suisse y compris, tout récemment, des hôpitaux, ont même saisi l'occasion au vol et mis Swissair à contribution pour mieux s'imprégner des critères d'efficience les plus pointus en la matière.

Après formation, le personnel de cabine Swissair n'est pas seulement à la hauteur pour servir les passagers dans les règles de l'art. Leur savoir-faire peut notamment se concrétiser par un chateaubriand découpé, sous leurs yeux, de main de maître. Les Flight Attendants Swissair connaissent aussi le cru d'origine et le caractère des vins qu'ils suggèrent à leurs hôtes. Ils sont familiarisés avec la géographie et les usages des pays ralliés ou survolés. Quant à l'avion, ils le connaissent presque aussi bien que le commandant de bord. Qu'il s'agisse de langer un bébé ou de prêter main forte en d'autres circonstances, rien ne saurait les déconcerter. Hommes ou femmes, ils conservent leur allant et leur tenue demeure irréprochable dans les plus dures conditions climatiques ou les situations les plus éprouvantes.

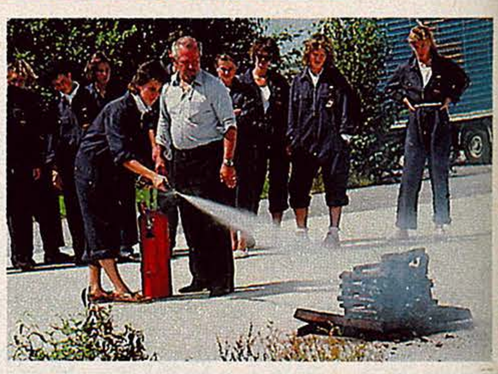
Quelque 2500 candidats se manifestent chaque année pour acquérir cette formation. Environ 40% d'entre eux sont passés au crible et seuls 200 à 250 jeunes gens subissent avec succès les épreuves d'admission. Très astreignantes, les cinq semaines de formation théorique sont suivies de trois mois de stage pratique à bord des avions en compagnie de moniteurs chevronnés. Formation couronnée, après examen, par l'obtention du diplôme et formation complétée, enfin, par des cours de perfectionnement réguliers. Quoi qu'il arrive entre ciel et terre, les Flight Attendants Swissair ont donc les pieds sur terre. Ils connaissent tous les scénarios envisageables, savent comment réagir et maîtriser élégamment la situation – une attitude qui, assurément, peut faire école.

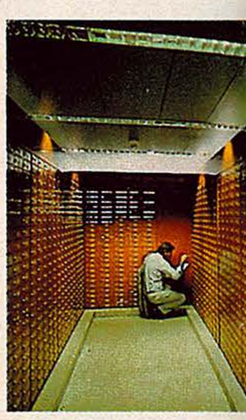
Which Swissair training programs have taken off to new horizons?

Courses for cabin personnel. They follow a curriculum which has attracted considerable attention beyond the airline industry. Now, tourism boards in Germany, Austria and Switzerland – and most recently hospitals – have also asked Swissair to provide this know-how to their staff members. Which just goes to show how quality standards can come out of the blue sky. Through Swissair.

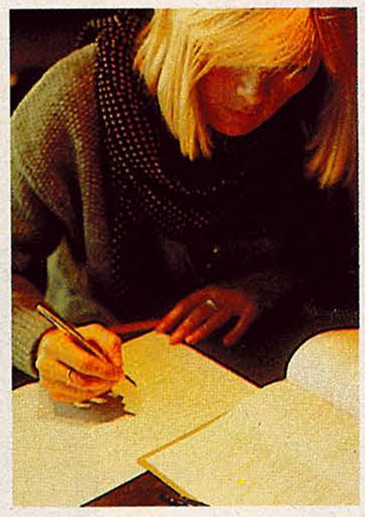
Relying on a sound gastronomic service background, Swissair flight attendants not only can expertly slice a Chateaubriand. They know the origins and characteristics of the wines they serve. Also, they can provide information on the countries overflown en route and on the flight's destination. They know almost as much about the aircraft as the pilots themselves. If need be, they can even change diapers. The men and women in these crews have learned to preserve a well-groomed appearance under extreme climatic conditions and maintain reassuring poise even under unusual circumstances.

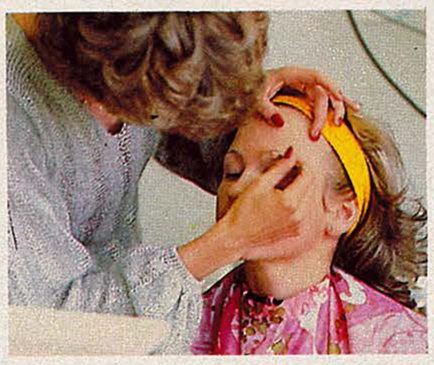
Each year, some 2500 persons apply for Swissair flight attendant training. About 40% of these applicants are subject to a comprehensive suitability test and ultimately, 200 to 250 young trainees are enrolled each year. The program starts with an intensive 5-week theoretical course, followed by 3 months of practical training on board, under the watchful eyes of a supervisor. A diploma is issued to each trainee who successfully completes this program and passes the final examination. Thereafter, regular refresher courses are held to assure a high standard of excellence. It is virtually impossible to fluster Swissair flight attendants on duty. They know how to handle even the most delicate situations on board with calm and composure. And that's one qualification which certainly opens up new horizons in any occupation.

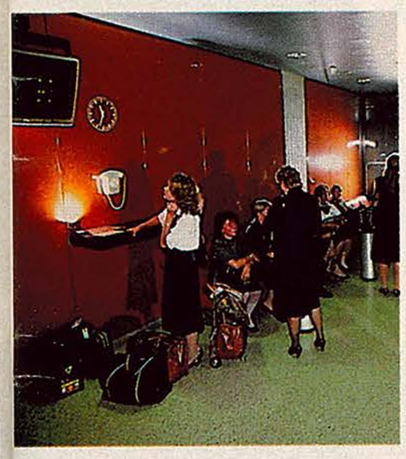


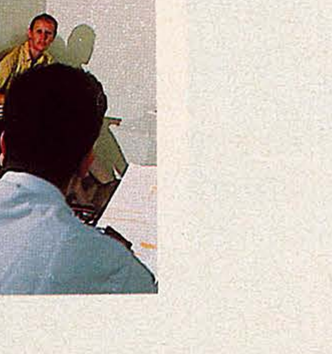


swissair









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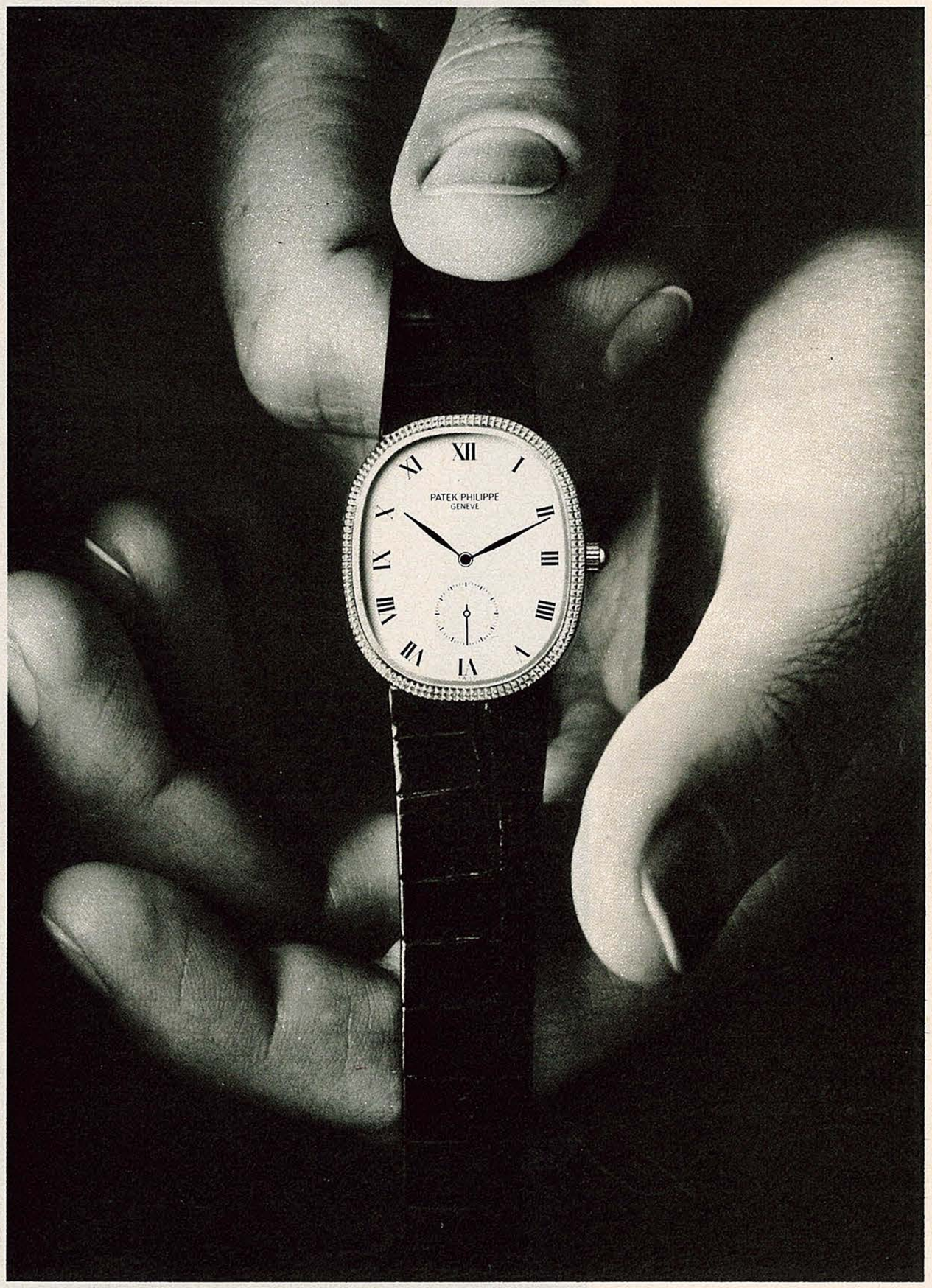

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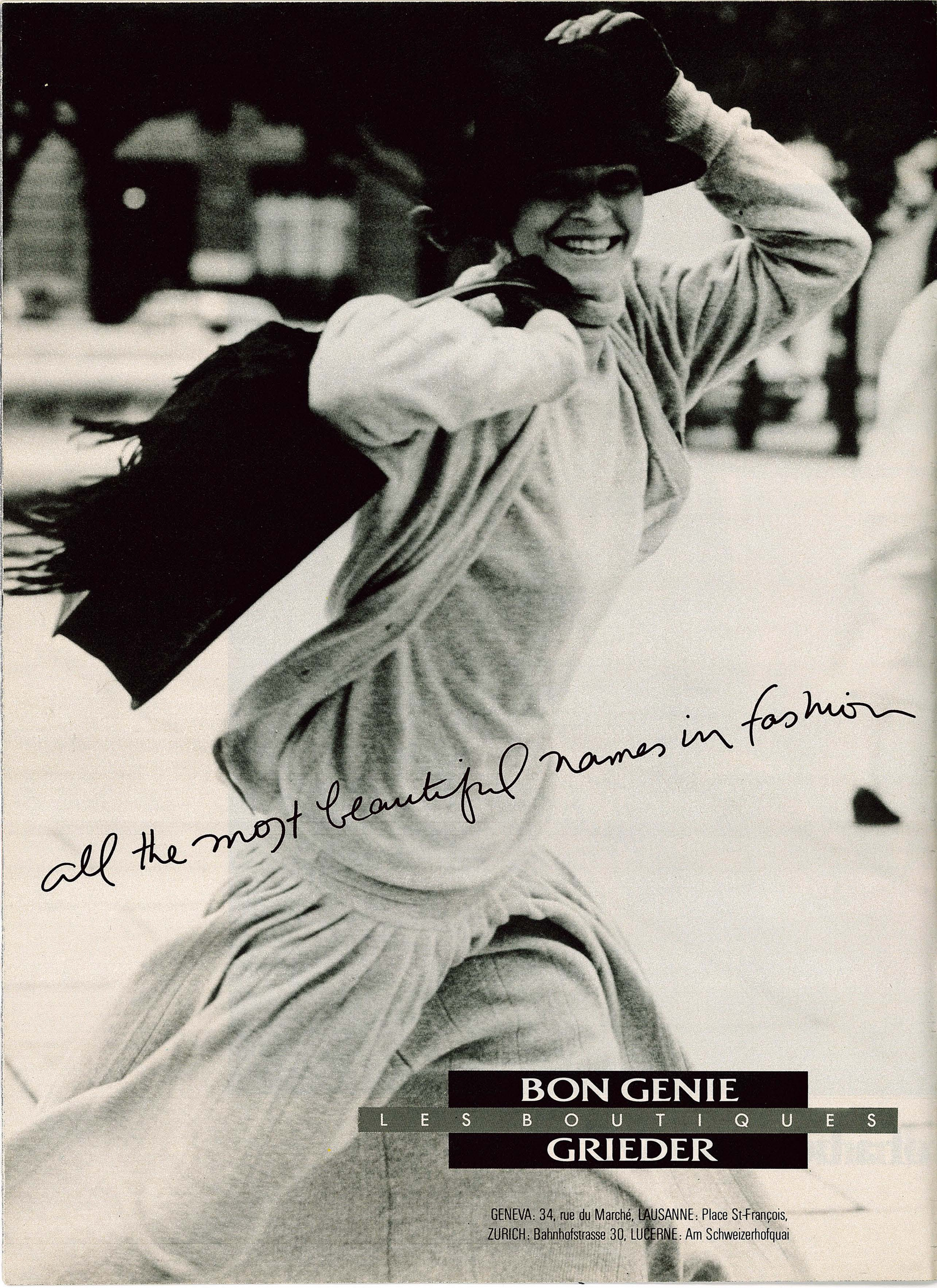

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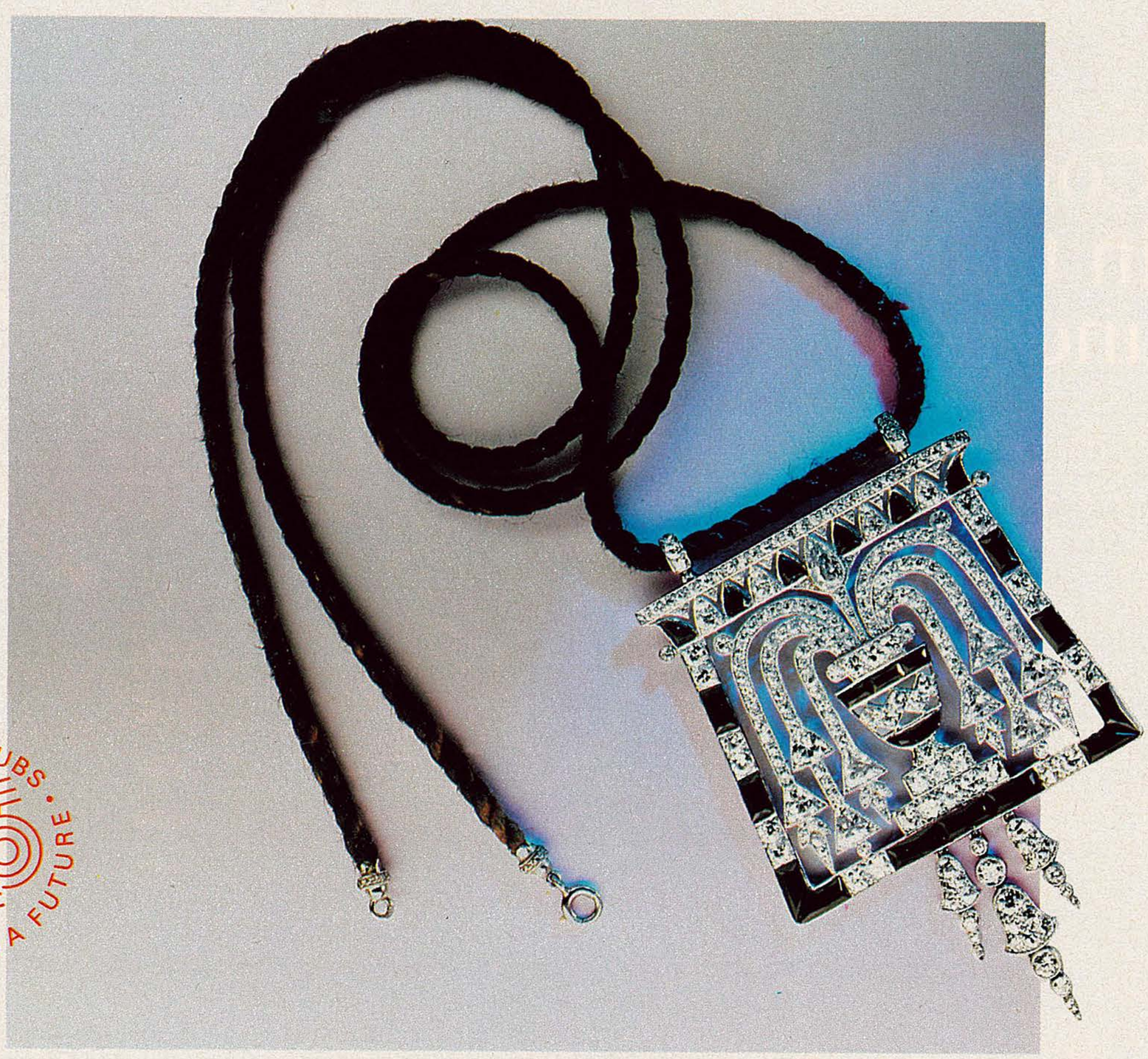

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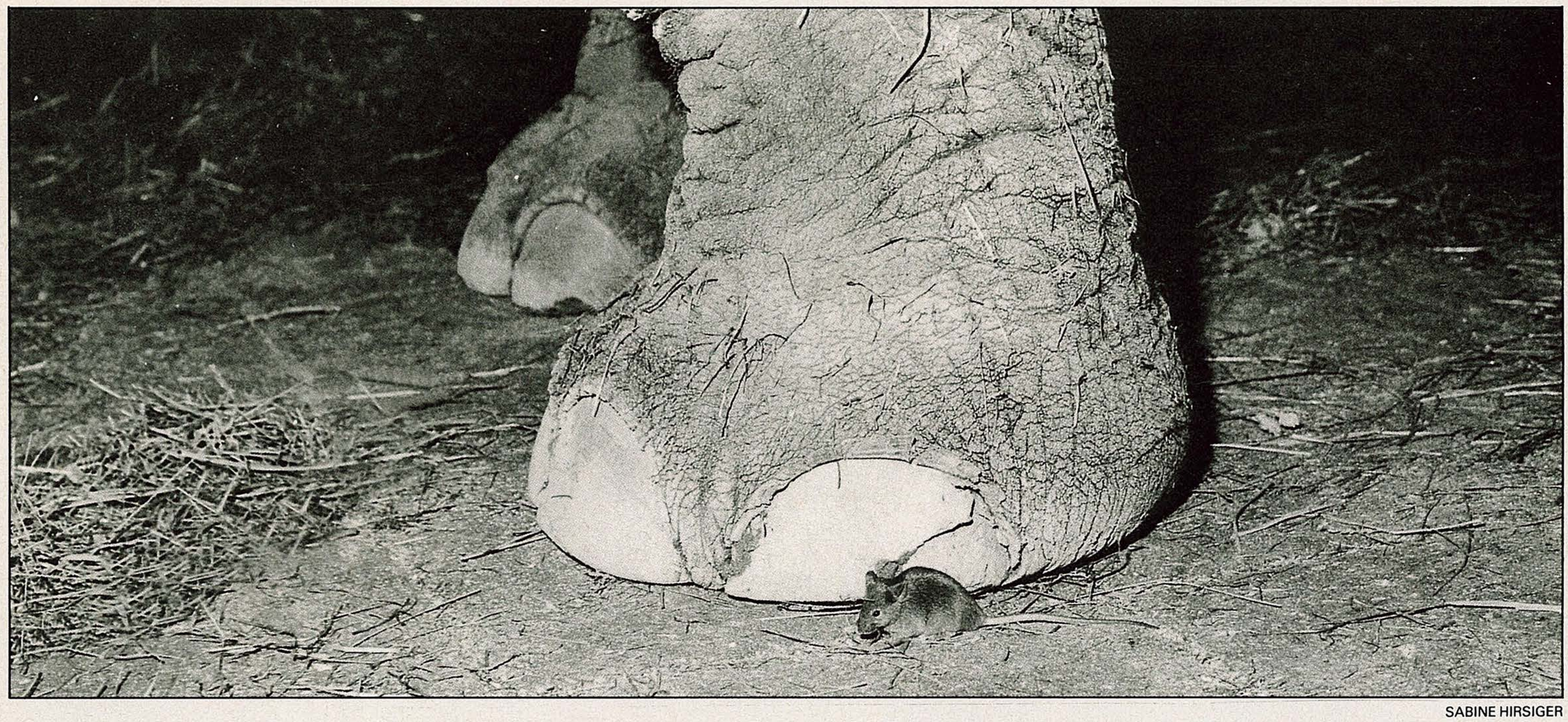


SABINE HIRSIGER

The Elephant in the China Shop

. . . where it would behave quite well!

FRED KURT

People are sometimes said to have a hide like an elephant, meaning a thick one, but in reality the 35 square metres or so of grey hide that covers the largest land animal is a sensitive and carefully tended organ.

Elephants bathe two or three times a day, then massage their massive bodies with mud and blow dust over them with their trunks to keep blood-sucking insects away from their velvety skin, which is covered with stiff hairs about the length of a finger. What the elephant cannot see, or feel with its exploring trunk, it senses with these bristles. It would thus be quite capable of cautious movement in a china shop, and not by any means as clumsy as the popular phrase implies.

Elephants are in fact not clumsy at all. They are even very nimble for their size. A fully grown bull of the Indian species weighs around 4200 kilograms. Every square centimetre of its large foot pads carries a weight of only 600 grams. A human fashion model, seemingly so much lighter, may well be exerting a pressure of two kilograms on the catwalk with every square centimetre of her high-heeled shoes.

Nor are the elephants Methuselahs, as some people seem to think. Most of them live to be only thirty or so, and the oldest on record died in Sydney Zoo at the age of 69. In the wild it would probably have died of hunger at least ten years earlier, for the elephant's last four molars are worn down before it reaches sixty.

Even in young elephants each of the four rami of the jaw bears only one molar. The teeth are replaced every few years. The last of the six back teeth or molars – each weighs five kilograms and is nearly half a metre long – appears at an age of about forty years.

It is not only the teeth that are changed – the whole elephant keeps growing throughout its life. Most specimens are about one and a half times the weight of a full-grown man when they are born. And when the oldest and largest African elephants die at about fifty, they are three and a half metres high and nearly six tonnes in weight.

The largest of our land animals is also the strongest. Yet in a relative sense it is on the weak side. A fully grown Indian elephant weighs as much as 64 humans, but it can pull only as much as 20 of them. And although it is easily four times the weight of a big draft horse, it cannot carry even twice as much for any distance.

The reason for this is that muscular strength does not increase in proportion to body mass. It is the cross-sections of individual muscles that count, and the bigger an animal is, the smaller these cross-sections are in relation to body weight. The leap that a tiny mouse is capable of making is an athletic performance that even the strongest elephant cannot match.

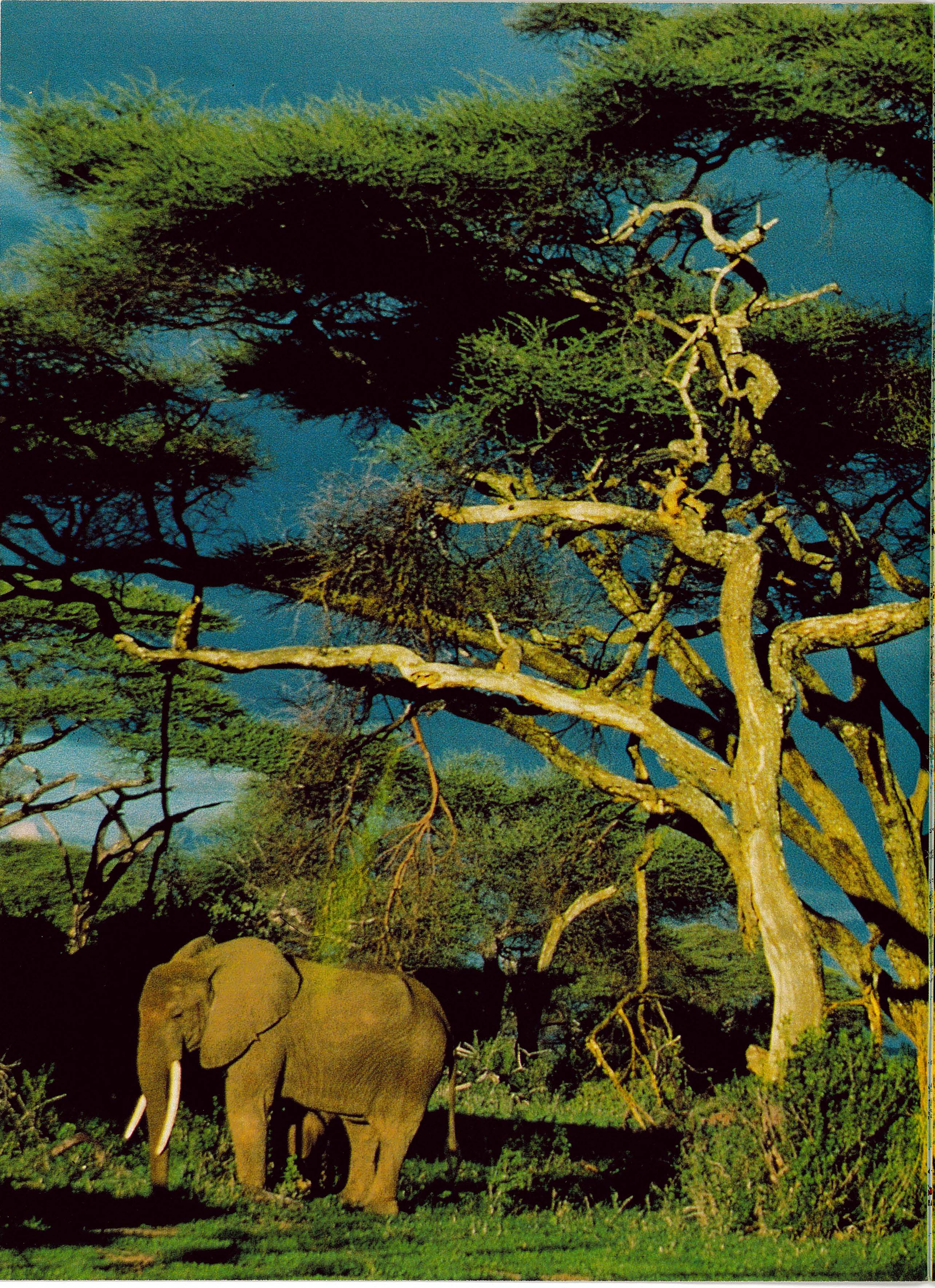
This comparison is a cue for another correction: elephants are not afraid of mice, a claim that is sometimes made because elephants that lie down to sleep roll up their trunks in a spiral. This protects the sensitive tip of the trunk, but not against adventurous mice: such small creatures would simply be blown away when the elephant breathes out every ten seconds. The protection is against the cold night air. Against the heat of the day the elephant protects itself by flinging moist earth over its body, or by using its ears. In the elephants of the East African steppe the ears account for one third of the total surface area of the body. The innumerable fine blood vessels they contain dissipate excess body heat, giving it up to the surrounding air through the thin skin.

The elephant's trunk is a multi-purpose organ: a nose, a feeler, a weapon, a snorkel in the water, a nozzle for drinking or taking a shower, a caressing or castigating arm in exchanges with other members of the herd. Its tip is a kind of olfactory hand. It is used for shaping and manipulating tools, such as tiny pieces of wood for grooming the skin or logs that it can throw with considerable skill at its adversaries.

The use of tools implies a well-developed intelligence. There can be no doubt that elephants have one. Their memories can measure up to those of humans. The elephants of the Knie Brothers' Swiss National Circus, for instance, know the way unaided from the railway station to the circus ground in at least sixty towns. And wild herds are just as good at finding the way to their feeding grounds.

Humans living in the tropics of the Old World eat rice, millet, wheat and sugar cane, which all belong to the family of the grasses, and similar grasses are also the chief food of elephants – another characteristic that is shared by elephants and man. In fact, both might be described as highly intelligent tool-using herbivores. ○

Fred Kurt headed research projects on endangered species in South Asia from 1967 to 1980, making a special study of elephants. He now teaches ecology in the Seminar for Basic Pedagogic Training in Zurich. He is the author of: *Das Elefantenbuch. Wie Asiens letzte Riesen leben,* Rasch & Röhring, Hamburg 1986; *Das Management von Mutter Natur. Eine Einführung in die Ökologie,* dtv, Munich 1985.



Les éléphants et l'environnement

Escaliers géants, centres d'alimentation

FRED KURT

Entre 26 et 8 millions d'années avant notre ère, au miocène, les proboscidiens (c.-à-d. les pachydermes pourvus d'une trompe) avaient conquis presque toute la planète. Certains d'entre eux avaient acquis des dimensions gigantesques, devenant pour ainsi dire des bulldozzers naturels, capables de trancher dans le vif des forêts naturelles avec leurs mâchoires inférieures ressemblant à des pelles ainsi qu'avec leurs défenses et leurs trompes longues et puissantes. A l'aide de ces outils, ils transformèrent les forêts en savannes et en parcs naturels, et imposèrent ainsi de nouvelles conditions de vie aux animaux habitant auparavant dans les arbres; c'est ainsi qu'ils obligèrent les grands singes grimpeurs à descendre des branches où ils étaient établis. On vit alors apparaître dans les jeunes savannes africaines le dryopithèque, un être à démarche verticale n'utilisant pratiquement plus ses pattes antérieures pour marcher, mais seulement pour transporter sa nourriture et pour manier peut-être de simples armes, telles des pierres ou des massues. Selon les spécialistes, le dryopithèque constituerait un des premiers ancêtres de l'homme.

A ces époques archaïques, les éléphants n'ouvrirent pas seulement les espaces vitaux nécessaires pour le développement de l'espèce humaine; jusqu'à nos jours, ils ont aussi contribué à aménager pour l'homme les forêts tropicales inaccessibles de l'ancien monde. En effet, les pistes éléphantines sont si larges, même dans les plus profondes jungles, que l'on peut les parcourir confortablement sur de nombreux kilomètres dans un véhicule tous-terrains. Elles suivent généralement des voies marquantes du relief – par exemple le cours d'une rivière ou le tracé d'une arête de collines – en se tenant autant que possible à une ligne de niveau constante. C'est bien souvent sur les pistes d'éléphants que les chasseurs ou les colons pénétrèrent dans les profondes forêts vierges.

Lorsqu'au siècle dernier les colonisateurs européens décidèrent de relier à leurs ports de commerce, par des routes, les fertiles hauts-plateaux de Ceylan, de Birmanie ou de l'Inde, ils purent souvent se passer de calculs de génie civil compliqués: d'innombrables générations d'éléphants sauvages avaient déjà trouvé depuis des siècles les tracés les plus économiques. Très souvent, on construisit donc les voies ferrées ou les routes sur le tracé des pistes d'éléphants – ce qui n'empêcha pas ces derniers de continuer à utiliser leur réseau de communications.

Parfois, les pistes d'éléphants croisent des fleuves. Ces gués se reconnaissent facilement aux accès pratiques existant sur les deux rives: des «escaliers» géants formés de marches sans végétation et pouvant atteindre jusqu'à cinquante mètres de large. Ces emplacements sont presque toujours aussi des abreuvoirs et des zones de bains. En ce qui concerne les grands fleuves, les éléphants les traversent à la nage. Pour ce faire, les femelles soutiennent généralement leurs petits à l'aide de leur trompe. Parfois, les veaux se couchent aussi sur le cou des grands éléphants pour traverser le fleuve plus en sûreté, à la manière des petits hippopotames. Les éléphants nagent tellement bien qu'ils peuvent se déplacer dans l'eau pendant des heures, et couvrir des distances de plusieurs dizaines de lieues.

Les milliers de kilomètres de pistes d'éléphants qui traversent les savannes et les forêts tropicales, allant, dans les régions montagneuses, jusqu'à la limite d'arbres, et unissant de façon rationnelle les points fixes vitaux tels que pâturages, abreuvoirs, bains de boue et zones de repos, ne sont pas la seule preuve que ces grands animaux savent façonner leur environnement. Souvent ce sont les points fixes eux-mêmes qui ont résulté de l'activité de construction des pachydermes: les meilleurs exemples en sont les citernes et les emplacements de léchage de sel.

Pendant la saison sèche, les animaux creusent dans le sol avec leurs pattes antérieures, leurs défenses et leur trompe des trous de 4 à 5 mètres de profondeur allant jusqu'à la couche phréatique, obtenant ainsi des citernes d'eau. Quant aux emplacements de léchage du sel indispensable à leur santé, on peut en constater l'existence dans toutes les régions d'Asie du Sud-est où vivent encore des éléphants. C'est eux-mêmes qui les découvrent et qui les mettent à jour. Une de ces «mines de sel» les plus imposantes d'Asie méridionale se trouve près de Nodi, à la pointe sud-est de la réserve de Leuser, au nord de Sumatra. C'est une colline plate, dans laquelle des générations d'éléphants ont peu à peu creusé un fossé profond. L'échancrure qu'ils ont taillée dans la roche a trois mètres et demi de profondeur et jusqu'à vingt mètres de largeur. A partir de ce fossé, ils ont entaillé dans les deux parois verticales des canaux de la profondeur d'un bras pour atteindre les veines salines de la roche. Des traces fraîches de coups de défenses sont aujourd'hui encore la preuve d'une utilisation régulière. Pour satisfaire leurs besoins vitaux en sel, les éléphants sont même capables de creuser des cavernes. La plus grande caverne de ce type a été découverte en Afrique Occidentale: les galeries de plusieurs centaines de mètres de long, larges comme des tunnels de chemin de fer, qui mènent aux couches de sel gemme, sont l'œuvre de nombreuses générations d'éléphants.

Ces animaux agissent aussi de façon planifiée sur la variété des espèces et sur l'âge de la flore dans leurs zones d'habitat. En effet, il n'y a pas de plante qui soit hors de leur atteinte. Les petits arbres, ils peuvent tout simplement les renverser; quant aux gros, ils en arrachent l'écorce à l'aide de leurs défenses et de leur trompe. La force et le «doigté» qui caractérisent l'extrémité de leur trompe leur permet aussi d'arracher les feuilles sur des branches qu'ils ont préalablement brisées, ou sur des tiges de bambous arrachées de terre. Leurs molaires grosses comme des briques écrasent les noix de coco telles de simples noisettes. Il faut d'ailleurs noter que ce sont les herbes qui constituent la principale nourriture des éléphants. Dans les zones forestières tropicales d'Afrique Occidentale et d'Asie méridionale d'une part, et dans les forêts des pays de mousson comme Ceylan, la Birmanie ou l'Inde d'autre part, la présence d'herbe se limite aux clairières. C'est pourquoi dans ces régions, on pourrait supposer qu'une concurrence s'établit entre les géants toujours affamés, et que les mâles puissants sont fortement avantagés par rapport aux femelles ou aux veaux. Mais il n'en est rien, car un système social raffiné évite une compétition fatale entre les différents membres d'un même troupeau: dans les groupes comprenant des femelles et des veaux, on trouve toujours un éléphant gardien; il s'agit d'un mâle adulte qui présente un niveau extrêmement élevé d'hormones sexuelles mâles (environ 60 fois le niveau normal de testostérone). Il est ainsi dans un état de rut et d'agressivité survoltée, et maintient à distance de «ses» familles tous les autres mâles occupant aussi la clairière. Qu'ils le veuillent ou non, ces derniers doivent donc abandonner l'herbe aux familles, et chercher dans la forêt d'autres sources de nourriture, comme les écorces d'arbres qu'ils arrachent en longues lanières. Les arbres ainsi blessés meurent rapidement et, en s'abattant, écrasent la végétation et ouvrent de nouvelles clairières; il s'y développe

◀ **In the savannas of East Africa the acacias and other trees take on characteristic shapes because the elephants regularly strip off and eat their mineral-yielding bark.**

In den Savannen Ostafrikas zwingen die Elefanten den Akazien und andern Bäumen ganz bestimmte Wuchsformen auf, weil sie regelmässig von ihren mineralstoffhaltigen Rinden fressen.

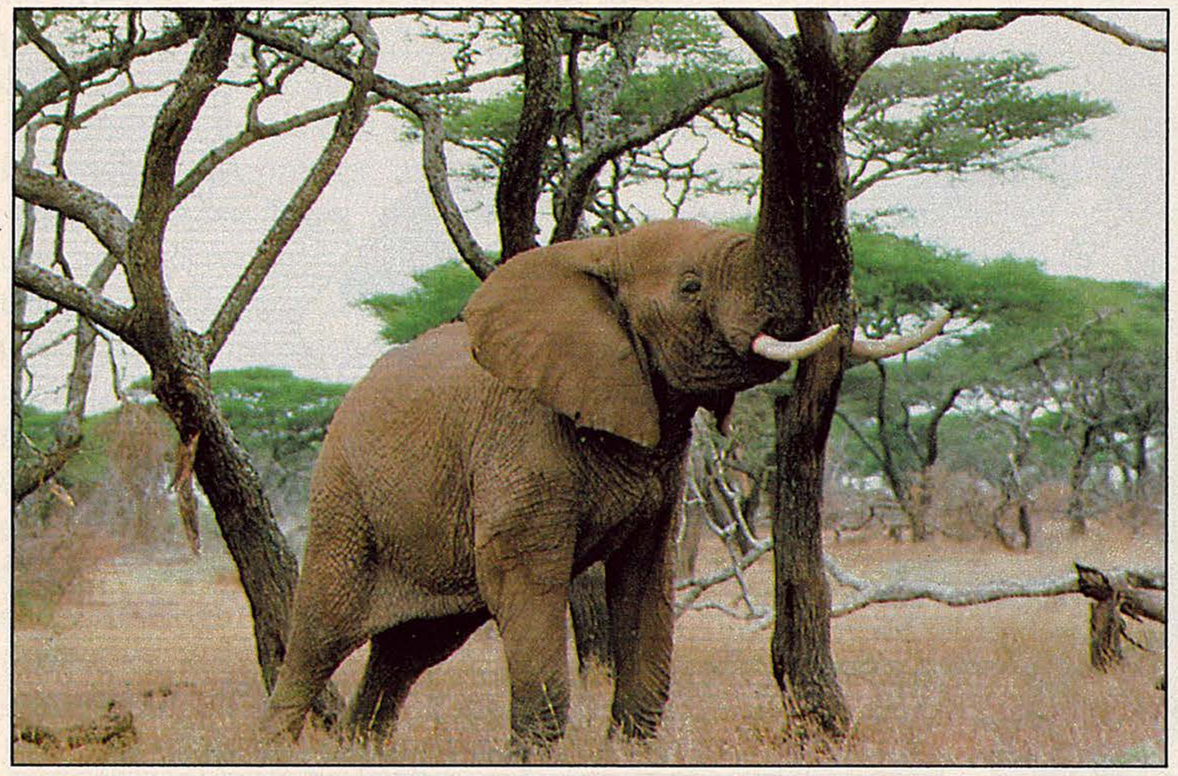
Dans les savannes d'Afrique orientale, les éléphants obligent les acacias et autres arbres à pousser selon des formes spéciales, car pour se nourrir, ils leur arrachent régulièrement des lambeaux de leur écorce riche en minéraux. (Photo by Reinhard Künkel)

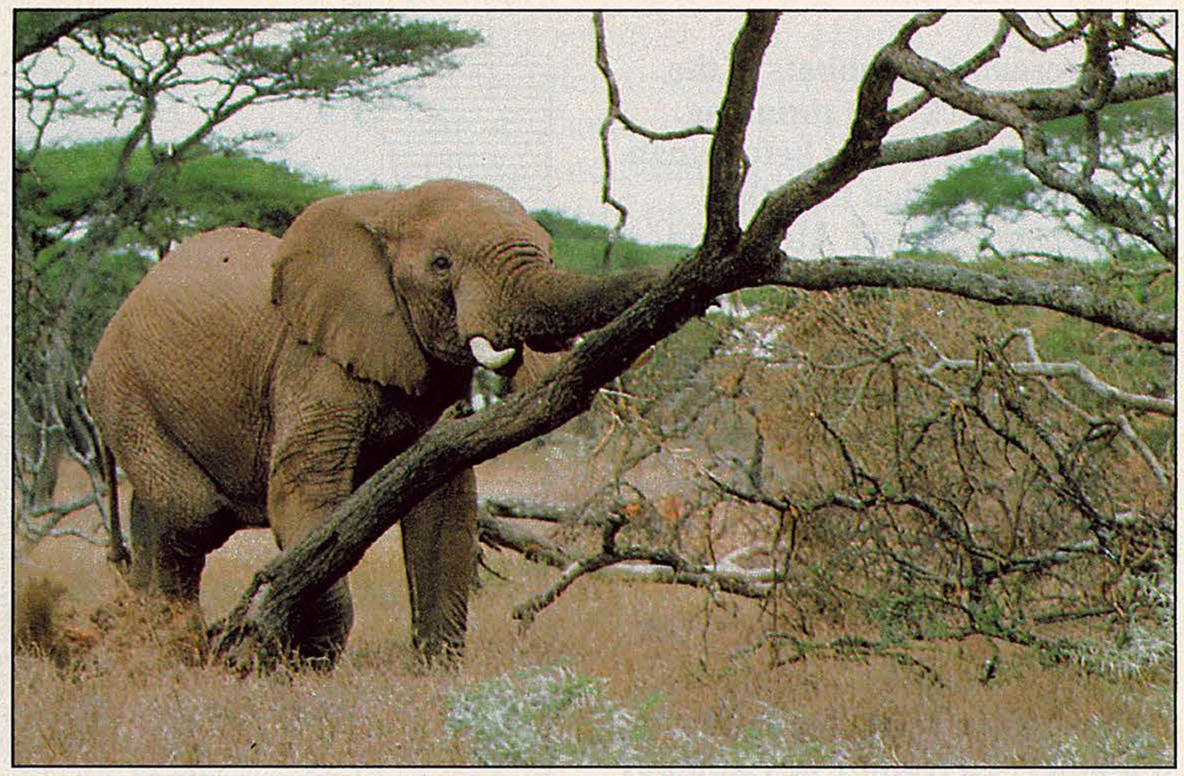
African elephants push over small trees with their trunks (above). Endless generations of elephants have also excavated deep caverns in the hard rock in their search for salt-containing strata (bottom), salt being an essential component of the elephants' diet.

bientôt des bambous et autres herbes, sans lesquelles les exigeantes familles ne pourraient pas survivre. Donc, les mâles accélèrent le renouvellement des forêts tropicales et créent ainsi de nouveaux centres d'alimentation.

Il existe aussi des espèces d'arbres dont la prolifération dépend de l'intervention des éléphants, du fait que ceux-ci apprécient beaucoup les fruits: un certain nombre d'arbres de la forêt vierge portent des fruits dont les noyaux, qui en assurent la reproduction, ont la taille d'un œuf de poule ou même plus (mangues, durians, arbres à pain, etc.). Or, ces noyaux d'ensemencement présentent la même caractéristique que ceux des cerises, des abricots ou des prunes: ils ne peuvent gonfler et germer que si la peau cireuse de leur enveloppe a été attaquée par les sucs digestifs d'un mammifère, et le système digestif des éléphants est le seul que les grands noyaux peuvent traverser sans dégâts. En les «semant» loin de l'arbre mère avec une bonne portion de fumier frais, les grands pachydermes permettent ainsi la prolifération de ces espèces à fruits. Il n'est donc pas étonnant que dans les régions où l'homme a exterminé les éléphants, certaines sortes d'arbres ont également disparu. Ce sont ainsi au moins soixante espèces d'arbres qui ont subi ce sort dans les grandes forêts équatoriales d'Afrique Occidentale.

De nos jours, ces animaux géants sont prisonniers de leurs réserves, et vivent resserrés entre les villages, les plantations et les steppes crées par l'homme. Trop d'éléphants sur un espace insuffisant signifient, pour l'environnement naturel, la même chose que pas d'éléphants du tout. Dans les deux cas, la variété naturelle des espèces diminue rapidement. En effet, l'homme et l'éléphant ne peuvent se supporter et vivre en équilibre avec leur environnement que là où ils sont tous deux en petit nombre. ○





REINHARD KÜNKEL

IAN REDMOND

Mit dem Rüssel stossen afrikanische Elefanten kleine Bäume um (oben). Auf der Suche nach salzhaltigen Schichten graben unzählige Elefantengenerationen tiefe Kavernen in den harten Fels (unten).

Avec leur trompe, les éléphants africains renversent facilement les petits arbres (en haut). A la recherche de couches salines, des générations d'éléphants ont creusé de profondes cavernes dans la roche dure (en bas).

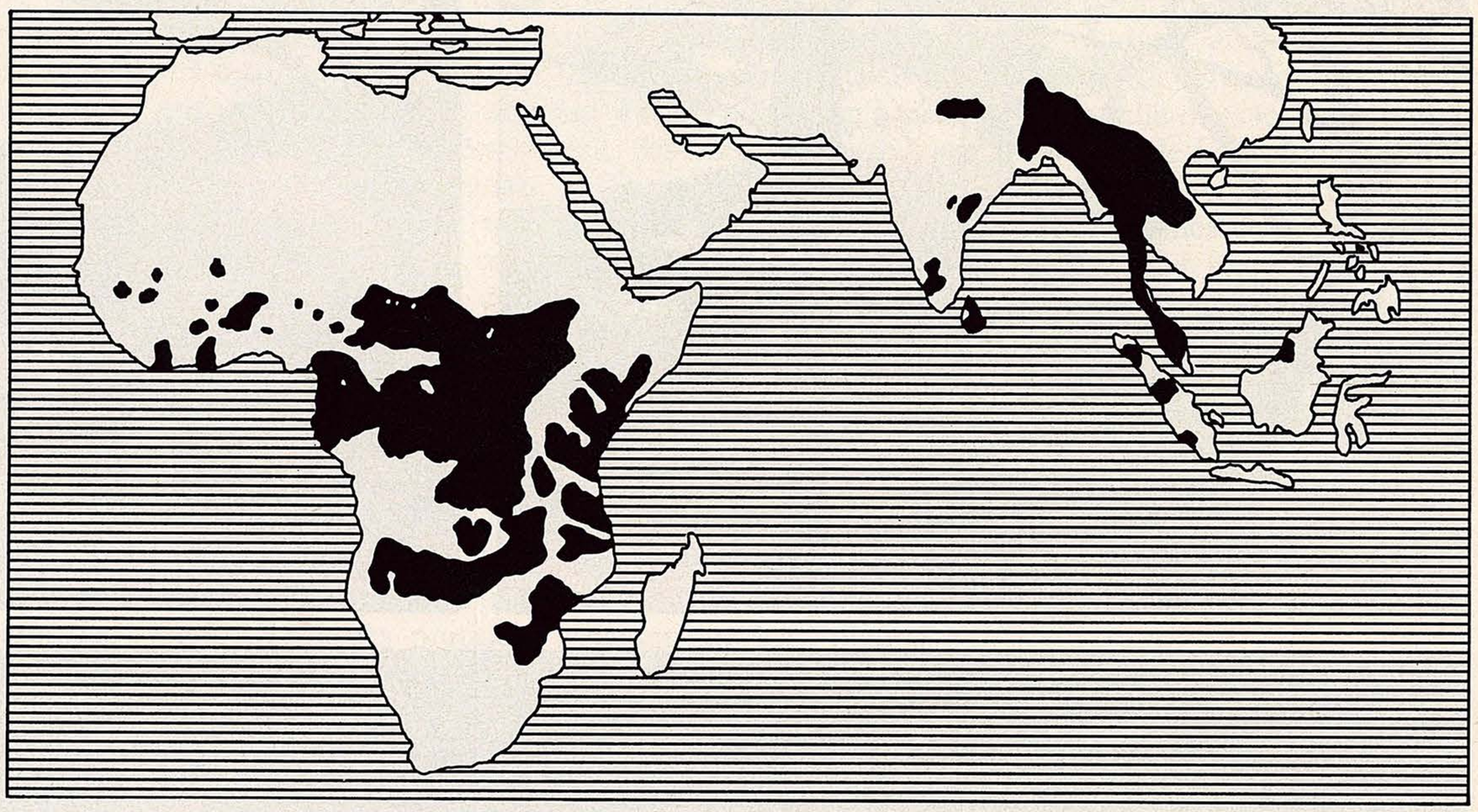
Finding out about Elephants

Facts and Speculations

The present-day habitats of the elephant (black) are shrinking. They began to retreat before man in antiquity; at that time they lived almost all over Africa and from Mesopotamia to China.

Das heutige Verbreitungsgebiet des Elefanten (schwarz) schmilzt weiter. Der Rückzug vor dem Menschen begann schon im Altertum; damals waren sie fast überall in Afrika und von Mesopotamien bis nach China verbreitet.

Les zones d'habitat actuelles des éléphants (en noir) continuent de diminuer. La retraite des animaux géants a commencé dès l'antiquité; auparavant, on en rencontrait presque partout en Afrique et leur zone d'extension allait de la Mésopotamie à la Chine.



PETER JACKSON

How many elephants are there in the world today? No one knows for sure. As they are the largest land animals in existence, it would seem quite simple to count them. But elephants can be very elusive. Most live in forests and woodlands, where you can pass within a few metres of a herd without knowing it is there. And they can move extraordinarily silently on their great padded feet.

Sumatra is a dramatic example of our ignorance of elephant numbers. As recently as 1981 a leading specialist put the number on this extensive island at about 350. Since then field research has indicated that the number could be as high as 4500 or more. And when the Indonesian government organized a drive to move into a reserve an estimated 150 elephants which were ravaging crops in an area of southern Sumatra, observers watching them cross a river counted no fewer than 232.

Again, in Africa, the elephant population of the vast forests of the Zaire basin is a matter of considerable dispute, and no one has yet found an effective way of counting them.

It is important to have at least a rough idea of the number of elephants in order to manage them in our increasingly crowded world. They need a great deal of space in which to live, and, particularly in Asia, space is at a premium as the human population grows, and the elephants' forest habitat is converted to agriculture and other human use. In Africa, where these pressures are increasing and elephants have been heavily exploited for ivory, new programmes to ensure that the offtake does not drive the species towards local or overall extinction depend on knowing how many there are.

Aerial census has provided reasonably accurate figures for several savanna countries of Africa. The census-takers fly low in a grid pattern over a set area and count the elephant they see within markers fixed to the outside of the aircraft. A sample ground census may then be taken to assess the accuracy of the aerial survey, and corrections applied to produce final maximum and minimum totals. These figures can then be extrapolated to provide the estimated population of larger areas of similar habitat. But two thirds of Africa's elephants live in the tropical forests, and, despite estimates based on local observations and on the amount of ivory entering international trade, numbers can only be roughly gauged. The ivory output has been used in a computer model, which suggests that there are between 800 000 and 1 300 000 in Africa. These figures represent a margin of error of no less than half a million!

The Asian elephant is wholly a forest animal, and is only easily observed in the open in parts of Sri Lanka and southern India. As in Africa's tropical forests, visual counts are impossible, but Indian specialists, after several years of surveys, have estimated the total wild elephant population of the country at between 16 000 and 22 000. About the same number are estimated to live in eleven other tropical Asian countries. The overall total of wild elephants is thought to be between 30 000 and 44 000, plus about 13 500 domestic elephants.

In circuses and zoos, elephants have always been major attractions, showing astonishing intelligence and ability. And yet it is only in the past 25 years that intensive research has been carried out on the ecology and social life of elephants in the wild. Pioneer in this research was a young Scotsman, Iain Douglas-Hamilton, who lived with the herds in Tanzania's Manyara reserve for several years. He not only became able to identify many of the animals individually, but he even forged a close relationship with one female, who allowed him to approach closely and would stretch her trunk to touch his hand. (Douglas-Hamilton achieved this intimacy over many years of patient work, and such close approach is *not* advisable, as elephants are extremely powerful and even babies are strong enough to cause serious injury or death.)

Douglas-Hamilton established that elephant herds consist of related females and their young led by the matriarch. Young bulls leave the herd when they become sexually mature, and may join other males from time to time in temporary associations. Bulls may accompany the female herds in order to mate, but do not control them. Thus research ended the age-old myth of bull elephants leading herds.

Within the female elephant herds there is a close physical association, with the animals spending a great deal of time in actual contact. They greet each other with outstretched trunks and caresses. The existence of elephant "aunties" had long been observed – females who attend another giving birth and show a deep attachment to the baby as it grows. But all the members of a herd clearly show their sense of community.

The quest for food dominates the life of elephants far more than it does other ani-

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Peter Jackson is a member of the Asian Elephant Specialist Group of the International Union for the Conservation of Nature and Natural Resources (IUCN). He became interested in wildlife, and especially in elephants and tigers, during nearly twenty years spent in India as Chief Correspondent for Reuters.

mals. They require huge quantities of vegetable matter to maintain their great frames, and much of their time is spent feeding. In zoos, bull elephants eat about 300 kilograms a day. In the wild they range widely to take advantage of the seasonal growth of grass, leaves and fruits, and this is where the long years of experience of the matriarch count, for she knows which areas to visit at appropriate times, and where water can be found daily for drinking and bathing.

Although herds can be tracked from their footprints, droppings, and signs of feeding, scientists have been able to improve their research in recent years by the use of radio-tracking. Chosen individuals are tranquillized and fitted with collars carrying small radio transmitters. The radio emits a continuous "beep", which can be picked up at a distance and allows the animal to be located even when unseen. In forest, however, the range of the radio is extremely limited because the signal is deflected and absorbed by the trees. But from a light aircraft an observer can pinpoint radio-collared animals, and this is how elephant movements and feeding patterns have been studied.

In Zimbabwe a long-term study of elephant movements has been carried out in Sengwa with antennae mounted on masts at high points to maximize the range of reception. The results have shown that herds appear to come together in large gatherings of elephant clans formed of more distantly related animals.

Trumpeting is the noisiest sound made by elephants and usually seems to be a sign of anger or annoyance. But they make other sounds, including a deep rumbling, which originates in the upper chest. This can be quite a subdued sound as they feed, but can be loud too. Very recently a new sound has been found to emanate from elephants. It is inaudible to the human ear, and was discovered by chance. Kathy Payne, a research fellow of the New York Zoological Society who had earlier studied the strange songs of the humpback whales, felt a throbbing in the air when standing near a group of elephants at the Portland Zoo, Oregon. She described the sensation as like the vibration from the lowest note of a big organ pipe. Returning with special acoustic equipment, she was able to record the sound, which lasted 10–15 seconds, and to note that a part of the elephant's forehead fluttered at the time. It was found that females would emit the sound when a calf screamed, and apparently to communicate with each other. Further recordings were made in Kenya's Amboseli reserve. Dr. Payne speculates that the calls could be heard at distances of several kilometres. Such communication could explain coordinated movements by separated elephants and herds which have puzzled observers.

The pressures on elephants resulting from poaching and loss of habitat have led in the past 25 years to abnormal concentrations of elephants. Herds have destroyed large numbers of trees by stripping the bark or pushing them down, and park managers have culled them to reduce the numbers. But in Uganda researchers found that elephants appeared to have a way of regulating their birth rates, which declined when food and space became inadequate to support them. The decline is the result of longer periods between calving, which, given the gestation period of 22 months (Aristotle guessed right 2000 years ago, but Pliny was wrong in suggesting six months), cannot be less than three years. English scientist John Hanks, who carried out detailed research on elephant reproduction in Zambia when elephants were being culled, noted that there was a peak of fertility at about 18 or 19 years, and a decline after 40, which might act as a regulatory factor. But female elephants have been known to produce calves in their sixties. Usually one calf is born, but twins occur occasionally.

A remarkable event in elephant reproduction occurred in 1978 at Chester Zoo in England – the birth to a female of the Asian species of a calf which had been fathered by an African bull elephant. This is the only such instance on record, and had not been thought possible, since the African and Asian elephants are classified in different genera – *Loxodonta,* the African, and *Elephas,* the Asian. The baby, which had physical characteristics of both species, died after eleven days, not of any apparent genetic defect, but from a common intestinal infection. The stuffed skin of this baby can be seen in London's Natural History Museum.

Elephants live in hot climates, and such bulky animals need efficient means of keeping cool by dispersing body heat. African elephants are notable for their large ears, and scientists have found a lowering of temperature of five degrees Centigrade between blood flowing into the ear and that which flows out after passing through the network of veins in close contact with the air.

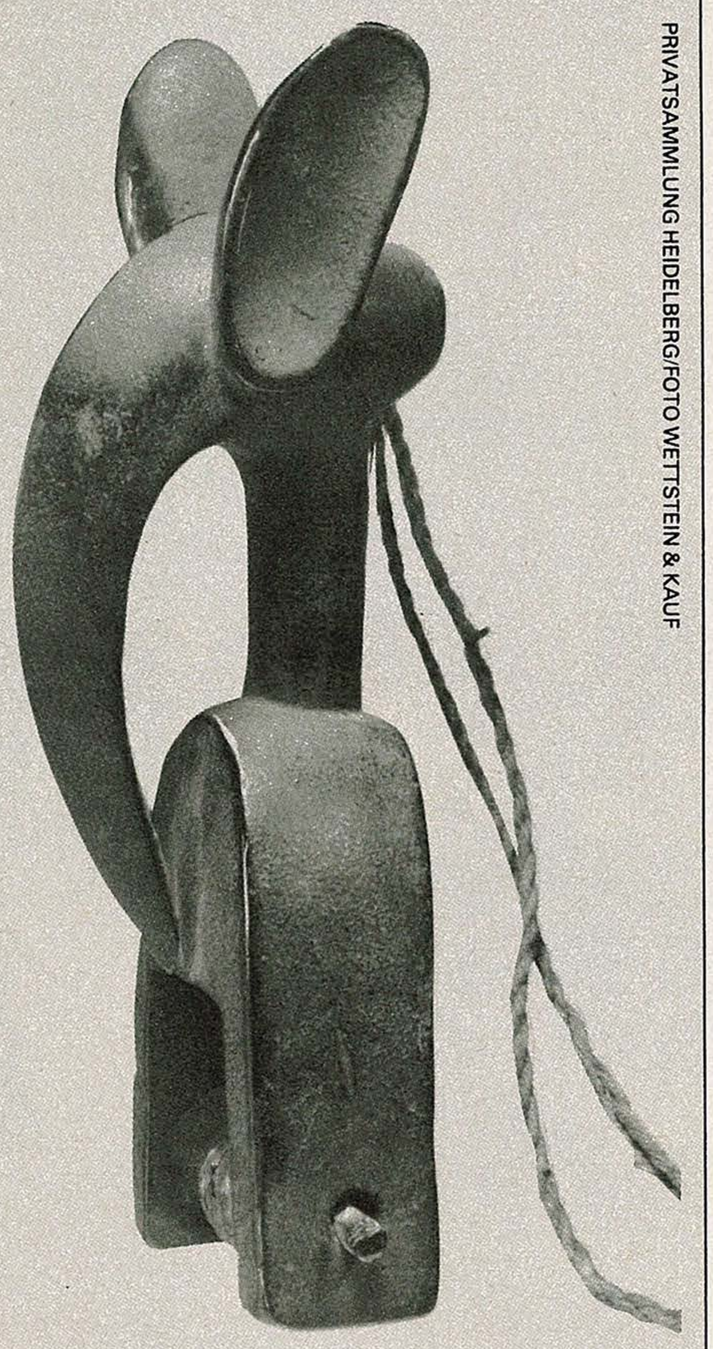
Now two American scientists have shown that the elephant's honeycomb-like skin surface acts to keep the skin moist and cool. Elephants like to shower themselves by blowing water from their trunks. The wrinkled skin traps the water, and the dust bath that frequently follows creates a muddy cover which retains the moisture for a longer time. ○

Four young work elephants return ▶ from the bathing-place where they are scrubbed twice daily by their mahouts. These guide their mounts with their feet; spoken commands are usually unnecessary.

Vier jüngere Arbeitselefanten kehren von der Badestelle zurück, wo sie täglich zweimal von ihren Mahuts geschrubbt werden. Die Reiter lenken ihre Tiere vor allem mit den Füssen; gesprochene Befehle sind unnötig.

Quatre jeunes éléphants de travail reviennent du bain où leurs mahouts les frottent énergiquement deux fois par jour. Les cornacs guident leurs animaux surtout avec les pieds. (Photo by Peter Jackson)

Ästhetik und Macht



PRIVATSAMMLUNG HEIDELBERG/FOTO WETTSTEIN & KAUF

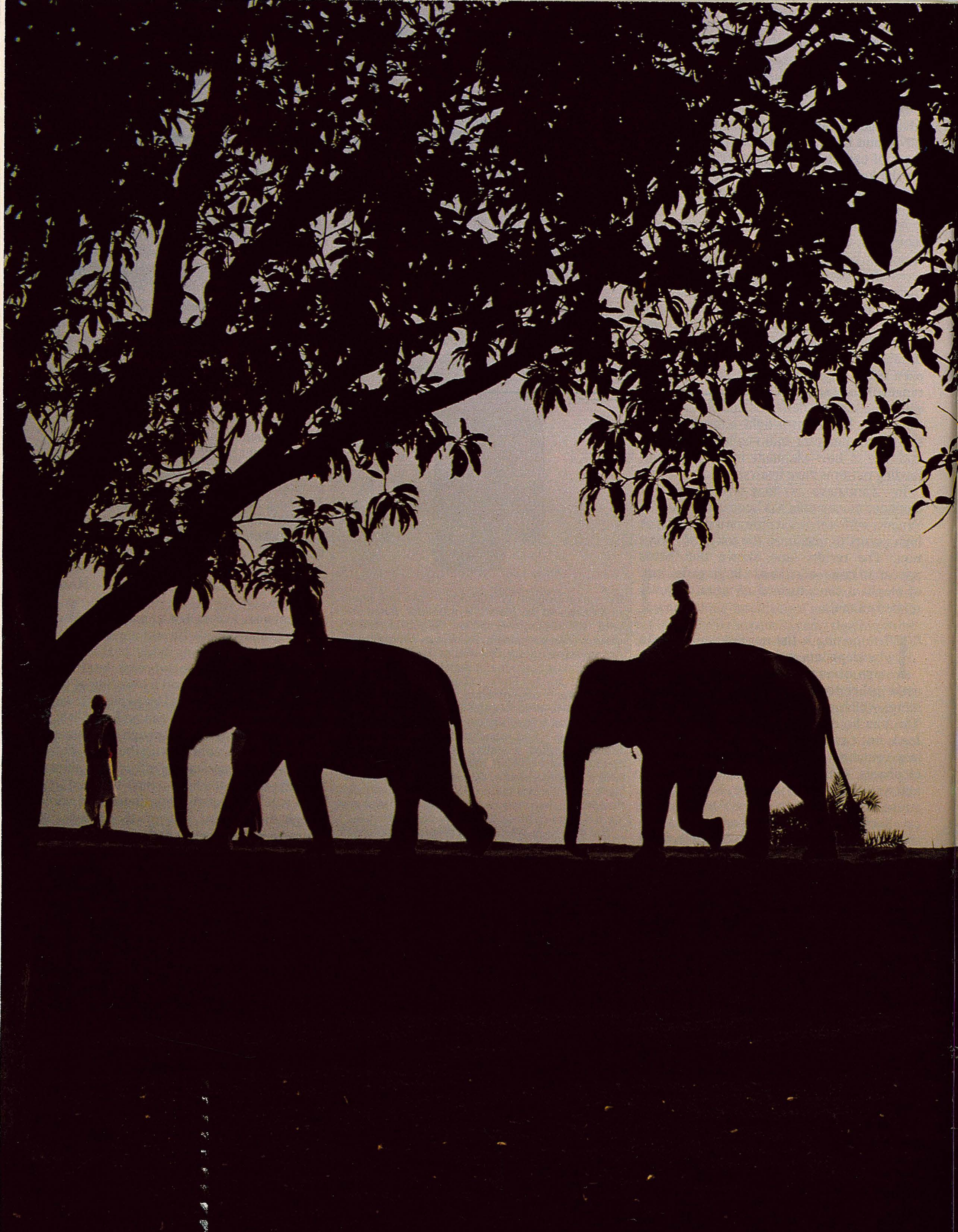
Bei vielen Völkern Westafrikas – etwa den Baule und Guro – ist der Elefant Symbol der Macht und wird auf kunstgewerblichen Gegenständen in diesem Sinn dargestellt. So besass König Anubli, das vorletzte rituelle Oberhaupt der Baule an der Elfenbeinküste, einen mit Blattgold überzogenen Stab, auf dem ein Elefant abgebildet war.

Doch auch Gegenstände des alltäglichen Gebrauchs wie Webrollenhalter – hölzerne Geräte am Webstuhl, über die die Litzenschnüre laufen (Bild oben) – sind manchmal in der Form eines Elefantenkopfes gestaltet. Dabei ist das Motiv häufig so weit stilisiert, dass man es nur noch mit Mühe erkennen kann. Das mag auch daran liegen, dass die wenigsten Schnitzer je einen Elefanten gesehen haben und das Motiv meist aus dem Kopf nach einer alten Vorlage kopieren.

Auf die Frage, warum sein Webrollenhalter mit einem so fragilen Dekor verziert sei, soll ein Guro-Weber geantwortet haben: «Man mag eben nicht ohne diese hübschen Dinge leben.» Eine rituelle oder magische Bedeutung dieser Gegenstände ist so gut wie ausgeschlossen. Die Weber sind sich einig: «Wegen ihrer Schönheit» seien die Webrollenhalter so kunstvoll bearbeitet.

Der Weber von Bangofla hat folgendes berichtet: «Meinen Webrollenhalter hat mein Vater geschnitzt. Er war kein Bildhauer. Die Alten konnten eben auch so etwas schön machen, ohne Schnitzer zu sein... Beim Arbeiten ist man zufrieden, wenn man etwas (Schönes) vor sich sieht.»

In Westafrika kommen überdies auch Elefantenmasken vor: Bei den Dan etwa heissen alle imposanten, mächtig grossen Masken «bie», das heisst Elefant, auch wenn sie gar nicht dessen Merkmale wie Rüssel und Stosszähne besitzen. Bei den Baule wiederum gibt es Elefantenmasken, die helmartig über den Kopf gestülpt werden, grosse Ohren und einen Rüssel haben, aber zu alldem noch mit Hörnern versehen sind. Im «gbagba»-Maskentanz erscheinen hintereinander Tiere – zuerst die domestizierten, dann jene aus der Wildnis, unter ihnen der Elefant. Das Tanzen der Elefantenmaske ist wilder als das aller anderen, ja es ist das Vorrecht des Elefanten, mit einem Gabelstock oder einem frischen Zweig herumzuwedeln und sogar Sachen im Dorf mutwillig zu zerstören. *Lorenz Homberger*



HENRI STIERLIN

Arbeitselefanten

Helfer des Menschen

FRED KURT

Jeder grosse Zirkus hält Elefanten in einem Stall angebunden, als wären es Pferde, Rinder oder andere Haustiere. Elefanten sind aber alles andere als das. Fast ausnahmslos musste jeder von ihnen gefangen und gezähmt werden. Denn Elefanten pflanzen sich in Gefangenschaft kaum fort. In Europa, Kanada und den USA wurden seit der ersten Elefantengeburt in einem Zoo im Jahre 1880 nur hundertvierundzwanzig asiatische und dreiundzwanzig afrikanische Elefanten geboren, also einer oder zwei pro Jahr.

Auch die Arbeitselefanten in Südasien sind meist Wildfänge, was erstaunt, denn gezähmte asiatische Elefanten rodeten schon vor fünfeinhalb Jahrtausenden in Mohendscho Daro und Harappa am Indus Wälder für den Menschen, und ihre afrikanischen Vettern trugen Pharaonen wie auch Hannibal in den Krieg.

Die Kunst des Elefantenführens ging in Afrika verloren – sieht man von einer kleinen Versuchsstation in Gangala-na-Bodio in Zaire ab. Doch in Asien verbreitete sie sich vom Indusbecken über ganz Indien und erreichte spätestens im Mittelalter Sri Lanka, Birma, Thailand, Vietnam, Kambodscha, Laos und die grossen Sundainseln.

Wo immer Hochkulturen entstanden, fronten in Süd- und Südostasien Tausende von Arbeits- und Kriegselefanten für den Menschen. Im 11. Jahrhundert hielten sich die Chasnaviden-Fürsten in Delhi tausendfünfhundert Elefanten. Kublai Khan, so berichtet Marco Polo (1254–1324), nannte fünftausend Elefanten sein eigen und der König von Ava (Birma) zweitausend. Um 1452 standen in der Peel Khana, dem Elefantenstall, des Sultans von Delhi tausendvierhundert und zwischen 1463 und 1482 dreitausend Elefanten. 1588 demonstrierten die Singhalesenfürsten in Colombo den Portugiesen ihre Macht, indem sie zweitausendzweihundert Kriegselefanten aufmarschieren liessen. Englische Reisende, die nach 1616 an den Hof des Mogul-Kaisers Jahangir kamen, schätzten, dass der Herrscher allein vierzehntausend Elefanten besass und seine Adligen insgesamt vierzigtausend. 1792 meldete ein Nachrichtenoffizier dem britischen Gouverneur in Kalkutta, am Hof des Herrschers von Birma lebten sechstausend Elefanten. Ebenso viele besassen die Holzfällergesellschaften, die zu Beginn des 20. Jahrhunderts dort den Teakhandel betrieben. Und noch um 1950 verfügten die Moi-Fürsten in Vietnam über Hunderte von Elefanten, ganz zu schweigen von den Elefantenställen des letzten Königs, Bao Dai.

PETER JACKSON

Work elephants today are mostly beasts of burden (above). In earlier days they were also status symbols. Left: The Maharaja of Udaipur rides to the hunt on his elephant.

Arbeitselefanten sind heute vor allem noch Lastenträger (oben). Einst waren sie auch Statussymbole. Links: Der Maharadscha von Udaipur reitet auf seinem Elefanten zur Jagd aus.

De nos jours, les éléphants domestiques sont presque toujours utilisés pour transporter des charges (en haut). Autrefois, ils étaient aussi des symboles de pouvoir; à gauche: le Maharajah d'Udaipour part pour la chasse sur son éléphant.

So gross die Bestände zahmer Elefanten auch sein mochten, der Riese wurde nie zum Haustier. Es ist dem Menschen nie gelungen, ihn durch Zuchtwahl den menschlichen Bedürfnissen völlig anzupassen. Gründe dafür gibt es einige: Viele der Arbeitselefanten wurden nicht artgemäss gehalten, schlecht ernährt und durch allzuschwere Lasten überfordert, so dass sie sich nicht fortpflanzen konnten. Dies geht bereits aus den Schriften des Philosophen Kautiliya (um 300 v.Chr.) hervor und ebenso aus den Richtlinien des Oberstleutnants G.H. Evans, die er 1901 für die Elefantenlager in Birma schrieb.

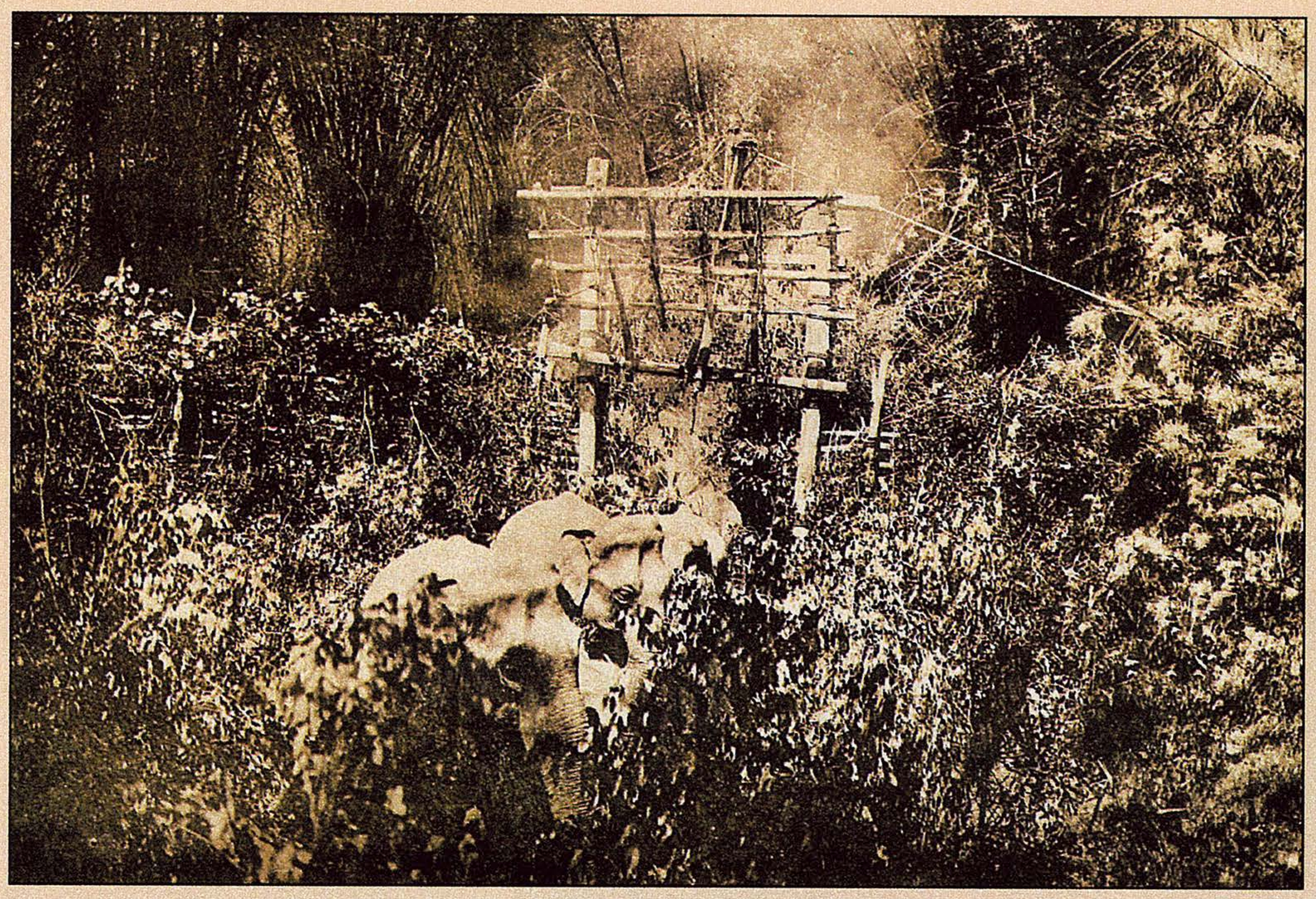
Vor allem aber standen ökonomische Überlegungen der Elefantenzucht im Wege. Es war ganz einfach billiger, Elefanten mit Schlingen, in Fallgruben oder in riesigen Stockaden einzufangen, einzubrechen, das heisst auf brutale Weise dem Menschen gefügig zu machen, und binnen weniger Monate abzurichten, als trächtige Muttertiere im zweiten Schwangerschaftsjahr von der Arbeit freizustellen und den Nachwuchs bis ins Alter von sieben Jahren zu betreuen.

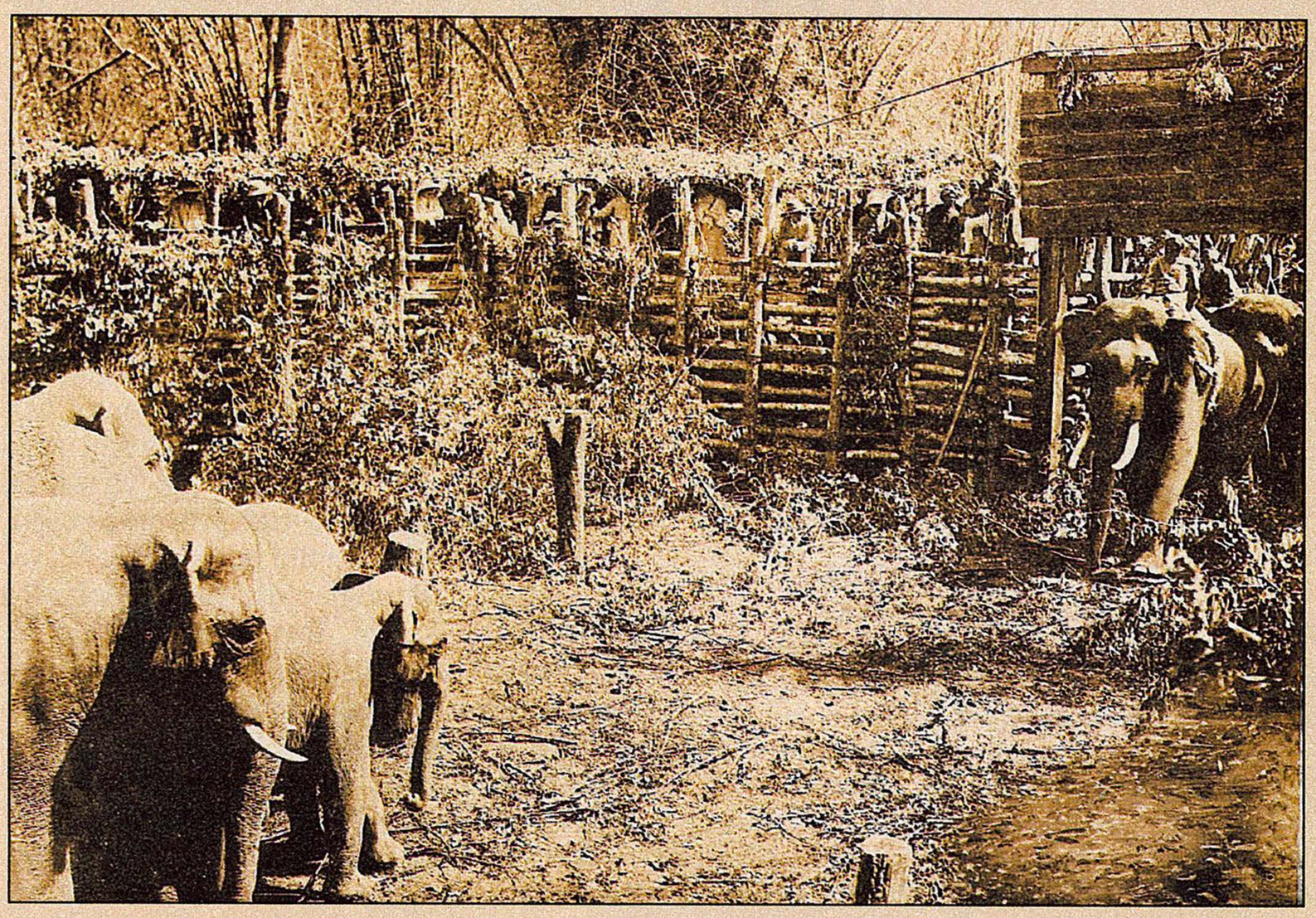
Wildelefanten liessen sich auch leicht fangen. An den Nebenflüssen des Mekongs wurden noch vor vierzig Jahren auf einen Schlag hundert oder hundertfünfzig Elefanten innert kürzester Zeit gefesselt. Tausendköpfige Treiberscharen jagten die Herden dazu ganz einfach in tiefe Gewässer. Im 19. Jahrhundert wurden im Hochland von Sri Lanka während einer einzigen Jagd bis zu vierhundert Elefanten in die Stockade getrieben. Und im südindischen Staat Mysore, dem heutigen Karnataka, wurden zwischen 1873 und 1961 allein im Kral von Kakanakota tausendsiebenhundert Elefanten gefangen. Bis ins 20. Jahrhundert überlebten rund zwei Drittel der gefangenen Tiere das Einbrechen nicht, und nur jeder achte der Überlebenden schleppte länger als zehn Jahre Lasten für den Menschen oder trug ihn zur Jagd. Noch gab es Nachschub.

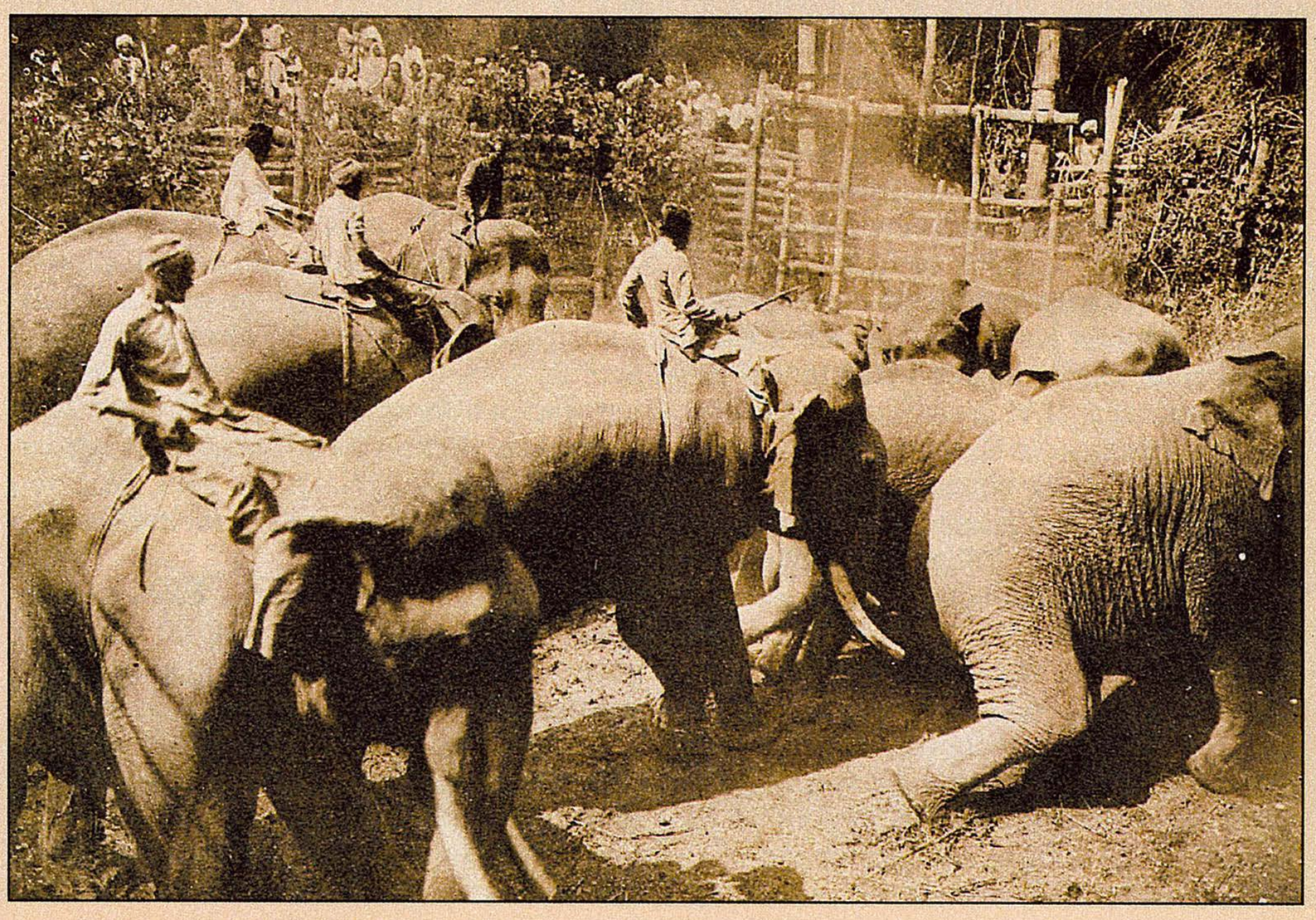
Als die Elefanten aus dem Nahbereich der Hochkulturen allmählich verschwanden und sich die Massenfänge nicht mehr lohnten, holte man die Tiere als Kriegsbeute bei seinen Feinden oder liess sie von Vasallen als Tribut entrichten. Ausserdem gab es schon vor der Zeitwende einen schwunghaften Elefantenhandel. Händler trieben ihre Ware während des Oktober- oder Novembervollmondes von Assam, Bengalen, Birma und Siam nach Sonepur am Ganges auf den traditionellen Elefantenmarkt. Sri Lanka, aber auch Bengalen und Pegu waren einst Handelszentren für die grauen Riesen.

Als europäische Mächte Südasien kolonisierten, verloren die Elefantenheere die Schlachten, wenn es dem überlegenen Feind gelang, ihre Phalanx mit Kanonendonner dermassen zu erschrecken, dass sie in Panik flohen. Im 17. und 18. Jahrhundert dagegen waren Arbeitselefanten in See- und Handelskriegen ein entscheidender Faktor. Der rasch wachsende Einfluss der Briten in Südasien geht nicht zuletzt auf Tausende von Arbeitselefanten zurück, mit denen sich vorerst in Birma und später in ganz Britisch-Indien der wichtigste Rohstoff für den Schiffbau ernten liess: Teakholz. Teakbäume wachsen in unwegsamem Gelände, von wo aus das Holz an die Küste geflösst werden musste. Vom Fällplatz bis zum nächsten grossen Fluss schleppten Arbeitselefanten die schweren Stämme.

Noch lebt die Tradition der Elefantenhaltung in Holzfällerlagern. Sie ist eine der Möglichkeiten, wenigstens ein paar tausend asiatische Elefanten in letzten Dschungelinseln nutzbringend zu erhalten. Denn mit Arbeitselefanten ist sanfter, selektiver Einschlag möglich. Die Tiere zerstören weder Unterwuchs, noch brauchen sie Strassen oder Treibstoff. ○







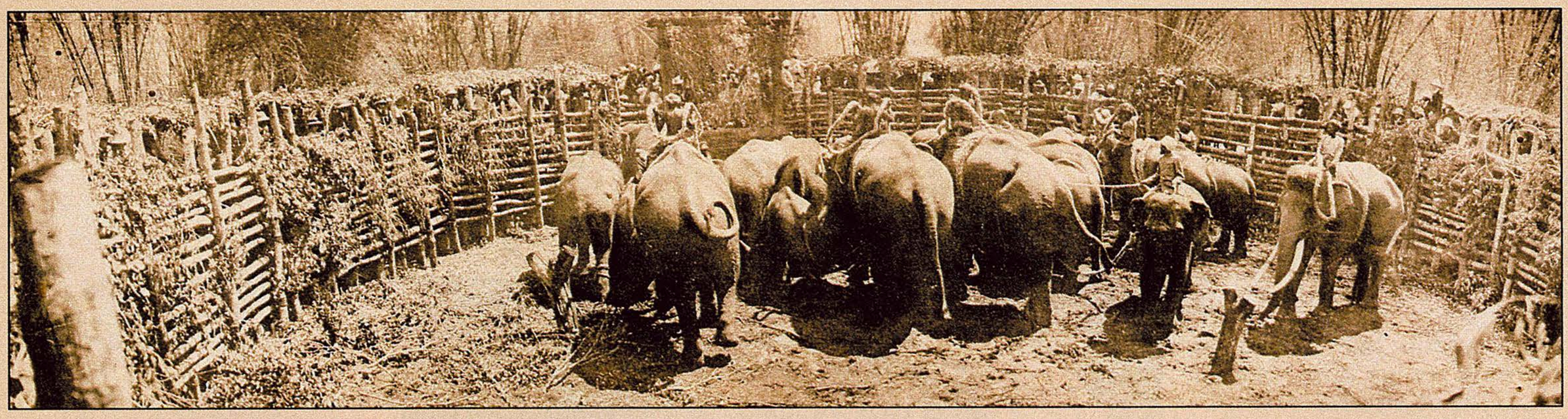
In Memory of a Kheddah in Kakanakota

In the kraal of Kakanakota (Karnataka) nearly 2000 elephants were caught between 1873 and 1969 and were shackled with the help of koomkies, which are particularly big working elephants trained for capturing their own kind. The pictures, taken in the early years of this century, show the first meeting of wild elephants and koomkies, the breaking-up of the herd, the roping of the recalcitrant wild elephants, and finally their first bath in the nearby River Kabani. Two tame bulls hold a fully grown wild elephant with the aid of thick ropes. Two thirds of the animals caught in these operations often died because they would not submit to the breaking-in process.

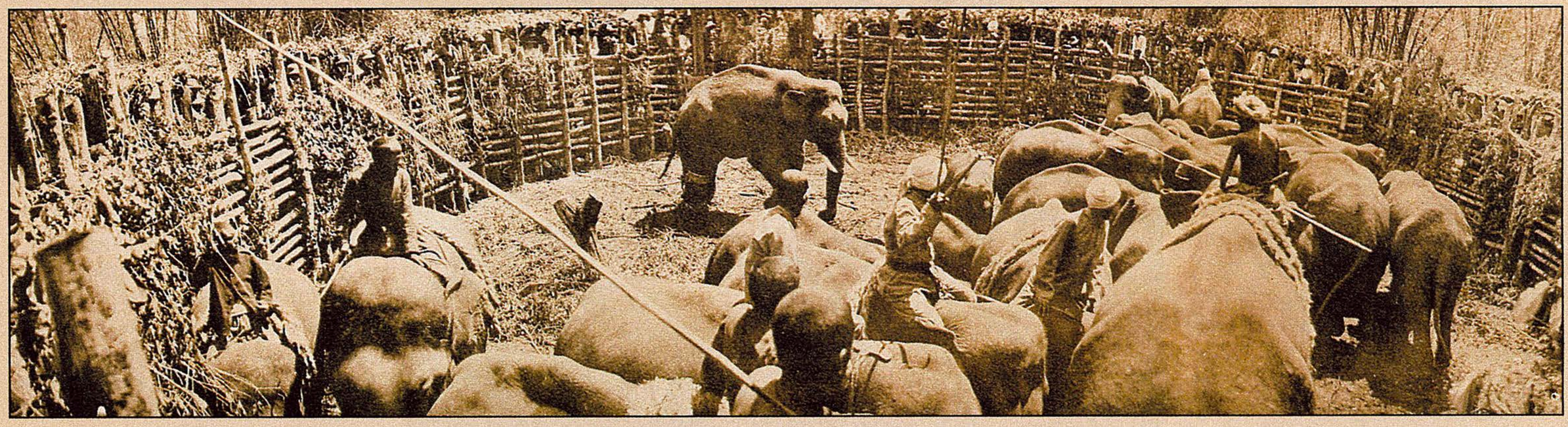
Im Kral von Kakanakota (Karnataka) wurden zwischen 1873 und 1969 nahezu 2000 Elefanten gefangen und anschliessend mit Hilfe von Koomkies, das sind besonders grosse, für den Fang von Artgenossen abgerichtete Arbeitselefanten, gefesselt. Die Bildfolge – sie wurde zu Beginn dieses Jahrhunderts aufgenommen – zeigt die erste Begegnung zwischen Wildfängen und Koomkies, die Trennung der wilden Gruppe, das Fesseln der sich ungestüm wehrenden Wildelefanten und schliesslich das erste Bad im nahen Kabanifluss. Zwei zahme Bullen sichern mit dicken Seilen einen ausgewachsenen Wildfang. Bei solchen Fangaktionen starben oft zwei Drittel der Elefanten, weil sie das Einbrechen nicht ertrugen.

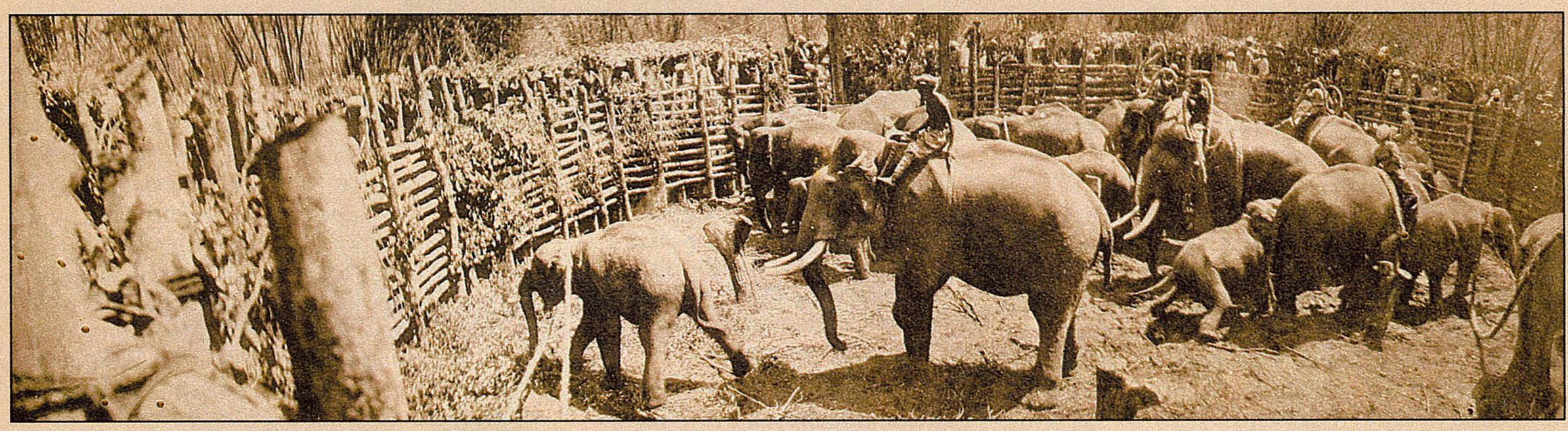
Dans le Kraal de Kakanakota (Karnataka), près de deux mille éléphants ont été capturés entre 1873 et 1969. La capture et le domptage des éléphants sauvages se faisait à l'aide de koomkies, c'est-à-dire d'éléphants domestiques particulièrement forts, qui étaient spécialement dressés à ce travail. La série de photos, prise au début du siècle, montre la première rencontre entre les éléphants sauvages et les koomkies, la séparation des groupes sauvages de leur troupeau, l'enchaînement des bêtes sauvages qui se débattent furieusement, et enfin le premier bain dans le fleuve Kabani proche. A l'aide d'épais câbles, deux forts éléphants mâles retiennent un éléphant adulte capturé. Au cours de ces captures, on perdait jusqu'aux deux tiers des éléphants, car beaucoup ne supportaient pas ce genre de dressage.

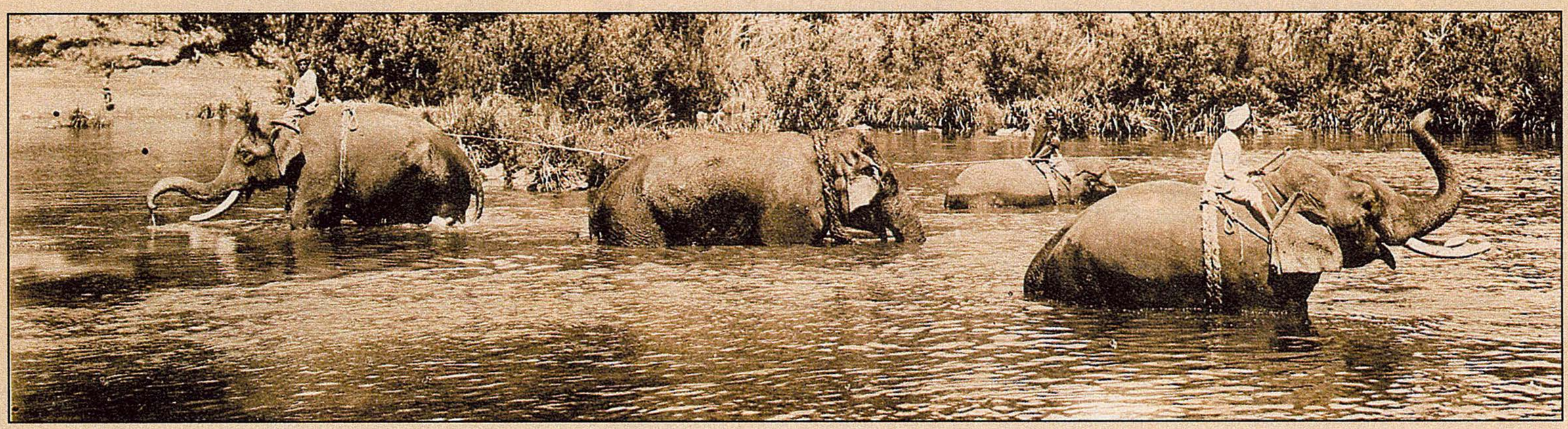
* From: "Kheddah Operation as witnessed by Their Royal Highnesses The Prince and Princess of Wales in the Kakankota Forests of Mysore. Febr. 1906."

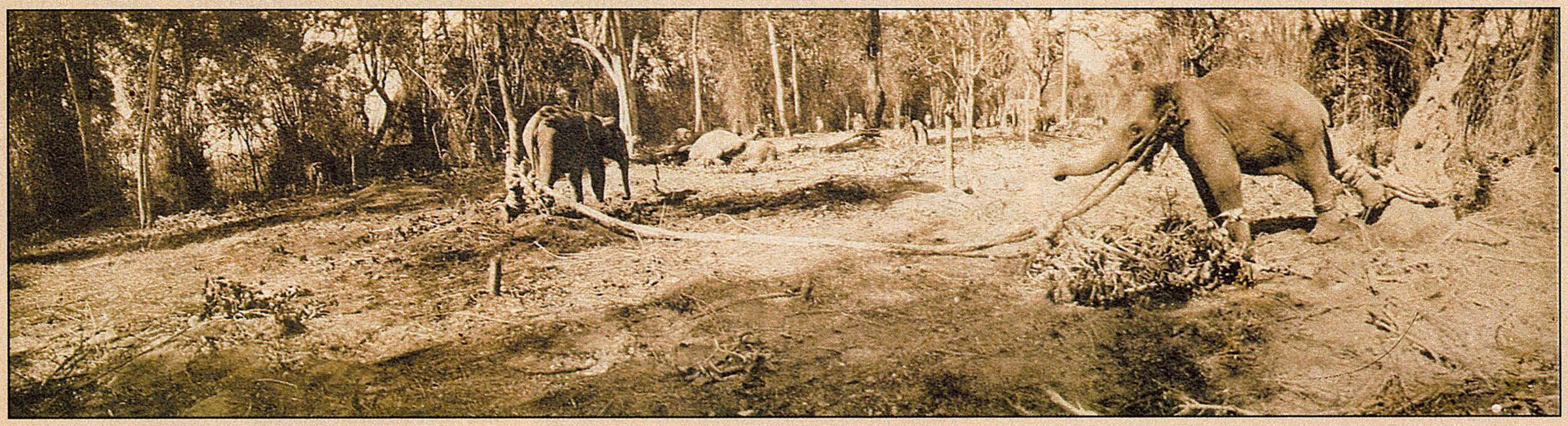


COLLECTION FRED KURT









Gentleness and Majesty

The Elephant in Indian Art

B.N. GOSWAMY

Elephants, they say in India, are cousins of the clouds. The description is remarkably apt: one sees in it clear references to the massiveness of the elephants, their smoky colour, their trumpeting reminiscent of the thunder of the clouds, and their ability to wander about at will, unhampered, fetterless. But perhaps there is even more than all this to the description. Like the clouds, welcome in a sun-parched land, elephants are widely regarded as an agreeable, auspicious sight.

Early texts speak of the need for a king to have great elephants in his stables, for they are the "king's clouds", and their being there is a guarantee of rain for the king's people in the period of the monsoons. This thought in itself draws upon important myths and symbols connected with the elephant in India. A widely known story says that the elephants once had wings and they roamed the skies, changing shapes like a cloud. Once, however, a small herd flew low and perched on the branch of a tree under which sat a sage teaching his pupils. Under the weight of the elephants, the branch fell and killed many of the disciples, at which the enraged sage cursed the elephants and made them lose their wings and their capacity to change form at will. From that time onwards, the myth says, the elephants descended to the ground. That is why, they say, elephants are clouds sentenced to walk on the earth. But their cousins in the skies like to visit them, and they come wherever they see them in large numbers.

It is upon the extraordinarily rich texture of myths of this kind – there are enough of these to fill a handsome volume – that the artist of India draws. The sculptor and the painter seem to know the elephant from the inside too, for they capture in their renderings not only its great, monumental form but also its majesty, its gentleness, its powerful intelligence. It is remarkable how often they represent the elephant as a noble animal, possessed of immense strength, but a strength that has been controlled.

ROBERT D. MACDONGALL

JEAN-LOUIS NOU

Above: The elephant Nalagiri paying homage to the Buddha. Medallion from a railing-pillar of the stupa of Amaravati, 1st century AD. Right: Gateway of the Great Stupa at Sanchi, 1st century BC.

Oben: Der Elefant Nalagiri erweist Buddha seine Reverenz. Medaillon auf der Balustrade der Stupa von Amaravati, 1. Jahrhundert n. Chr. Rechts: Tor der Grossen Stupa von Sanchi, 1. Jahrhundert v. Chr.

Ci-dessus: l'éléphant Nalagiri rendant hommage au Bouddha. Médaillon d'un balustre du stupa d'Amaravati, 1er siècle apr. J.-C. A gauche: porte du grand stupa de Sanchi, 1er siècle av. J.-C.

Quite possibly the very earliest representation of the elephant in Indian art is on a seal from the Indus Valley going back to the early centuries of the third millennium BC, which shows an elephant before a manger, clearly indicating that it was domesticated even at that early point of time. When we see it later in the early sculpture of India from the third century BC, it is in the role of one who is friend to men and gods alike, undoubtedly majestic but not threatening. We see elephants flanking the figure of the goddess of wealth and prosperity, Shri, seated on a lotus in the eternal waters, humbly offering her lotuses they hold aloft in their trunks, or bathing her with water from golden jars. We see the white elephant appearing in a dream to Queen Maya, mother of the Buddha, before his birth: gentle and crouching and betokening the fact that he who will be born from her womb will be paramount among men. When the Buddha's presence is indicated aniconically through a stupa, whole rows of elephants move towards it with gentle grace, bringing offerings in homage to the Lord. On great gateways of stupas, like the one at Sanchi, or at the base of enormous rock-cut temples that are images of a celestial world, once again it is elephants who appear supporting the great weight with patience and fortitude, "Indian counterparts of the Greek maidens who appear as columns on the south portico of the Erechtheion in the Athenian acropolis".

The Indian sculptor is never in doubt about the possibility that the elephant can break free of the constraints that are placed upon it by man. But somehow he seems also to be convinced about the innate goodness of the animal. Nowhere is this better illustrated than in the great tale from the life of the Buddha in which his jealously inclined cousin, Devadatta, plots to kill the Enlightened One. One sees this so perfectly in the great sculpted medallion from the railing of the stupa at Amaravati (first century AD), for the sculptor not only follows the story very closely but succeeds in capturing its spirit nearly to perfection. Devadatta had let loose on the highway the great elephant Nalagiri, drunk and maddened, raising a noise "like the thunder of black clouds at doomsday and with the force of the wind on a moonless night". The elephant rushed towards the Buddha, who remained, however, entirely calm, for benevolence and compassion were on his side. The elephant came charging, but upon seeing the Lord, he lowered his body and placed his head on the ground before him, "like a mountain whose wings had been shattered by a thunderbolt". The Buddha, the text says, stroked the head of the lord of elephants, "as the sun touches a cloud with its rays". The sculptor of Amaravati captures the entire drama in the scene: the elephant Nalagiri coming in from the left, proud and arrogant, throwing his trainer down and trampling people under his feet; men on the street throwing up their arms in terror; women gathering on the balconies to see this terrifying spectacle; and the Buddha calm and unperturbed at the extreme right, with the elephant seen a second time, through the device of continuous narrative, bending at the feet of the Master.

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In the Hindu tradition the elephant even turns into a suppliant at the threshold of God when in deep trouble himself. An episode to which the devotee and the artist turn with remarkable feeling is that of *Gajendramoksha,* literally "the salvation of the king of elephants", in which an elephant, upon entering the water, was laid hold of by an octopus-like creature and was unable to free himself, thrash about as he would. In this dire strait, he thought of Vishnu and made a piteous appeal to him as a devotee, hearing which Vishnu, as the story goes, left his throne in the heavens and ran barefoot to climb on to the back of the divine bird-vehicle, Garuda, to free the elephant by slicing off the head of the marine creature. The story is told in impassioned verse in Sanskrit that is often recited daily by devotees, for it embodies the promise of divine assistance for a mortal in his hour of need. The sculptor of the great fifth-century temple at Devgarh treats the theme with as much understanding and feeling as does the Kotah painter of the eighteenth century.

The elephant is rendered as often in painting as it is in the sculpture of India, but it would seem as if in later painting the emphasis somehow shifts from the elephant's aspect of gentleness to that of majesty, the pomp that one associates with kingship. It is not that intimate, tender scenes involving the elephant are missing from the area of painting, but it is far more common to see elephants in the role of royal mounts, or appearing on the battlefield as parts of a royal army.

To the Muslims coming in from outside, the elephant was still a stranger, but by the time the Mughal empire had been established in the middle of the sixteenth century, they were wholly comfortable with him. When Abul Fazl, the great biographer of the Emperor Akbar, speaks of the imperial elephant stables, he does it with much feeling:

"This wonderful animal is in bulk and strength like a mountain; and in courage and ferocity like a lion. It adds materially to the pomp of a king and to the success of a conqueror; and is of the greatest use for the army ... In vehemence on one side, and submissiveness to the reins on the other, the elephant is like an Arab (horse), whilst in point of obedience and attentiveness to even the slightest signs, it resembles an intelligent human being ... An elephant never hurts the female, though she be the cause of his captivity; he never will fight with young elephants, nor does he think it proper to punish them. From a sense of gratitude, he does his keepers no harm, nor will he throw dust over his body when he is mounted, though he often does so at other times."

Abul Fazl continues in this strain for long, combining hard information on the elephants in the imperial stables with all that he was able to gather about the nature, the training, the diseases and the habits of this noble animal. All this is reflected in the paintings of the period, and when one sees literal portraits of majestic animals bearing names such as *Alam Guman* (literally, "the pride of the universe"), or *Man Murat* (literally, "image of the heart"), one gets some notion of how the elephant was held and regarded. When they are not rendering elephants in a royal context, however, the painters frequently show them in their moments of great power: being captured in their wild state, breaking free of their fetters in the rutting season, or when unduly angered by something trampling everyone in sight and running amok.

VICTORIA AND ALBERT MUSEUM, LONDON

Above: The elephant Hawai with Emperor Akbar seated on his back pursuing another elephant across the bridge. From the Akbar-nameh, c. 1580. Right: The capture of wild elephants with the help of tame ones in a landscape. By Nainsukh, Pahari, c. 1750.

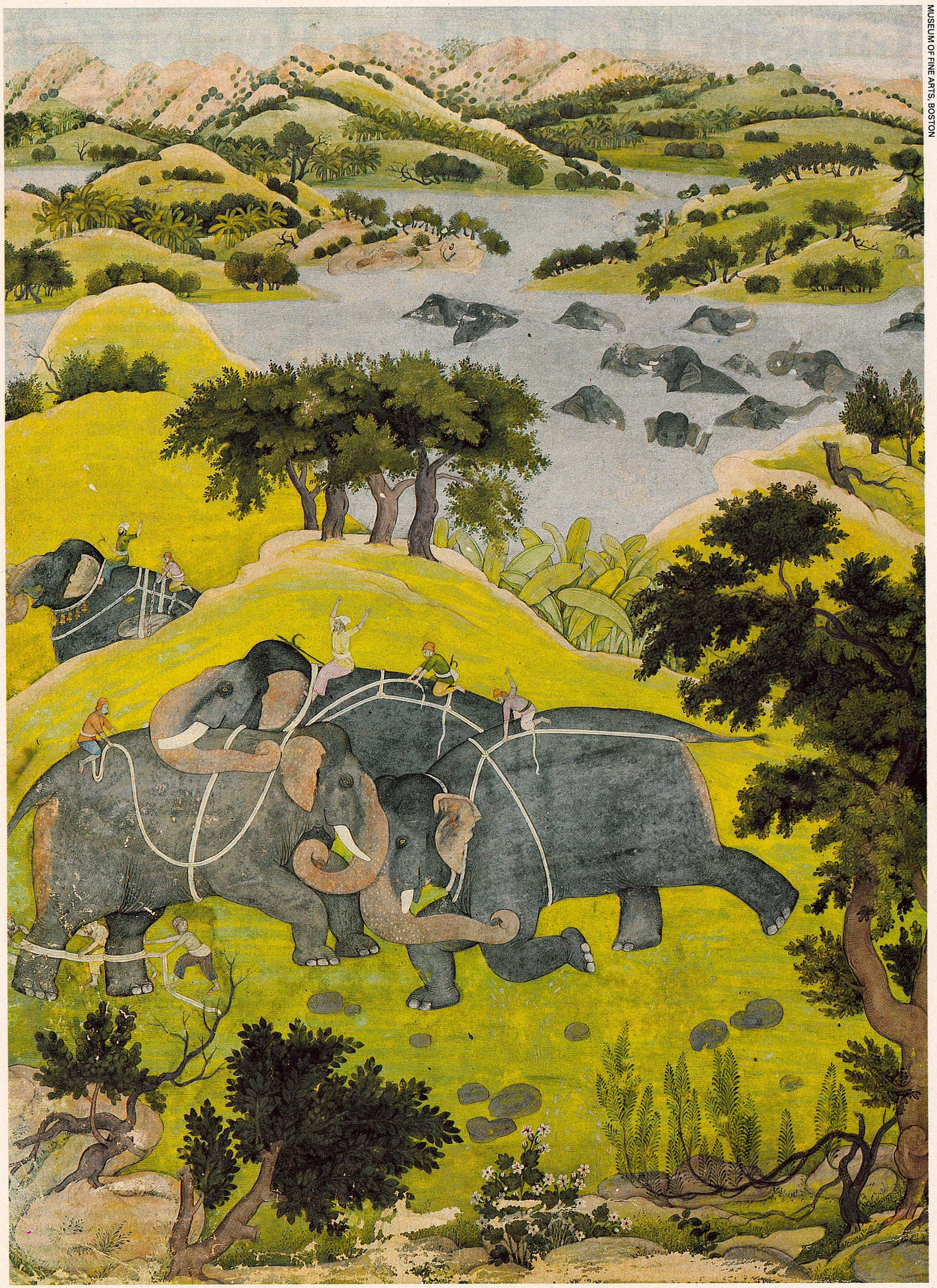
Oben: Der Elefant Hawai mit Kaiser Akbar auf dem Rücken, einen anderen Elefanten über die Brücke verfolgend; aus dem Akbar-nameh, um 1580. Rechts: Zahme Elefanten helfen beim Einfangen von wilden; Gemälde von Nainsukh, Pahari, um 1750.

Ci-dessus: l'éléphant Hawai chevauché par Akbar poursuit un autre éléphant. (Akbar-nameh, vers 1580.) A droite: la capture des éléphants sauvages à l'aide d'éléphants apprivoisés. Peinture de Nainsukh, Pahari, vers 1750.

In a great painting from the *Akbar-nameh* in the Victoria and Albert Museum, London, an unusual, stirring event from the times of Akbar is recorded. One reads about an elephant by the name of Hawai ("Swift as the wind") with the emperor on his back, fighting another elephant in great fury, worsting his opponent, and then pursuing him. Running at great speed, the two elephants go on to a bridge on boats built over the River Jumna with the emperor still steadfastly on Hawai's back. As the chronicler says: "Owing to the great weight of those two mountain-forms the pontoons were sometimes submerged and sometimes lifted up. The royal servants flung themselves into the water on both sides of the bridge and went on swimming until the elephants had traversed the whole of the bridge and got to the other side."

When rendering this scene, the great Akbar-period painter Basawan makes us witness, once again, as in the case of the Nalagiri episode, the entire tense drama of the moment. The bridge does seem to sway and sink with the weight of the two massive running forms; the swimmers and courtiers are in a true state of panic and trepidation, and the emperor riding bare-back on the elephant Hawai does look remarkably intrepid and agile.

But it is not only within the ambit of kings that the elephant was to be seen in this period: Away from the ceremony of the court and the din of the battlefield, the elephant always remained part of the awareness of the common man in India, alike in thought and in art. While great, monumental sculpture was being made in ancient India, or miniatures of jewel-like brilliance were being produced from the fifteenth century onwards, humbler versions of the animal were also being made: in the form of cast votive figures in metal, or moulded folkish figures in terracotta, touched often by deep feeling, for the elephant is to many people a reminder of the world of the gods, associated especially with the auspicious, boon-granting, obstruction-removing elephant-headed figure of Ganesha, who is the first of the gods to be invoked in speech or text. ○



MUSEUM OF FINE ARTS, BOSTON

Ganesha: The Elephant-Headed God

Remover of all Obstacles

KARUNA GOSWAMI

RIETBERG MUSEUM, ZURICH/PHOTO: WETTSTEIN & KAUF

His origins are not easy to determine, but he is everywhere in India, this remarkable elephant-headed god: at the entrances of doorways of temples, in the mouths of those that begin to recite or to pray, on the opening pages of account books of traders, on the walls of the commonest of homes in the form of cheap, framed calendar prints. The simplest form that he takes is that of a symbol, the swastika (the cross with lateral bars which was perverted to a different use in our own century). But all too often he is seen in his anthropomorphic form, elephant-headed, childlike, short and plump, four-armed, usually carrying his cognitive symbols or attributes: an axe, a goad, a noose, but also a platterful of sweetmeats towards which his ample trunk turns. Ganesha is there because he is auspicious, because he is the remover of all obstacles, lord of *ganas,* those semi-divine beings who embody energy.

But he is not easy to understand. In fact, the surprise his form and his near-universal worship in India cause has something of the very character of bewilderment that Pietro della Valle, the Italian who travelled to India in the early seventeenth century, already felt. Among the hosts of Hindu deities whom he encountered everywhere, there was this one who:

"had the head of an Elephant, and was called Ganescio. They say he is the son of Mahadeu, who finding him one day with Parveti, his wife, although his own Father, not knowing who he was, killed him out of jealousy, cutting off his Head; but afterwards, understanding that he was his own Son, he repented him of his error, and resolved to bring him to life again. Wherefore meeting with an Elephant (as he had purposed to do with what he first happened upon), he cut off his Head, and placed it on the dead Son's shoulders. Whereupon Ganescio revived, and thenceforward lived immortal with an elephant Head.

But I doubt not that, under the veil of these Fables, their ancient Sages have hid from the vulgar many secrets, either of Natural or Moral Philosophy, and perhaps also of History: and I hold for certain that all of these so monstrous figures have secretly some more rational significations, though expressed in this uncouth manner."

The observant Italian got things more right than some of the Western scholars of today, who read strange meanings into the myths surrounding the origin and the life of Ganesha, and project ideas that may have had very little to do with how he is understood in India: ideas about "maternal intimacy" and "paternal rupture", about "seed-substitutes" and "ritual mutilation", and the like. Ganesha is almost certainly far simpler than this. He embodies in his person two dominant strains in the Indian character: abiding fondness for children, and great love of animals, especially the elephant, which stands for so many things in Indian thought and literature: nobility, wisdom, affection, loyalty. The elephant is also the protector *par excellence* in the context of royal armies of old, a veritable wall of defence, capable of pushing back whole hordes of unfriendly forces. Hence his reputation for the removal of obstacles. It is not without reason that he is thought of as an ally, and when a deity is *gajanana* – possessing the head of an elephant – he is easily identified as a *vinayaka* or leader, as *Siddhidata* or bestower of success. He is the great guardian.

One sees the extraordinary role that Ganesha plays as a guardian in the place that he is assigned in the plan of the great sacred city of Benares. That city was laid out as a model of the cosmos, in seven concentric circles. In these, each has a shrine to Ganesha at the four directions and the four intermediate points, making a total of fifty-six Ganesha shrines in that city alone. Like the elephant guardians of the skies, these shrines impose obstacles upon those that enter the city with unfriendly intent, and remove obstructions from the way of those that regard it with reverence and affection. One remembers that it is as a guardian outside his mother's apartments that Ganesha was posted, in the great myth of which one version is told by Pietro della Valle.

Other myths centre upon the figure of Ganesha: those in which one of his broken tusks is explained, in which he loses his original human head, or he competes with his brother, Karttikeya, for one thing or the other. But to the devotee many of these details are scarcely of much concern. His view of Ganesha is a simple one. To him Ganesha is the son of the greatest of the gods, Shiva, blessed by him and capable of showering blessings in turn, a playful member of his household, ever happy and easily appeased. With Ganesha, however, he also associates unlimited wisdom, and the story with which the great epic, the *Mahabharata,* opens establishes for him finally the deity's enormous capabilities. The epic was meant to be written by the sage Vyasa, but none could be found who could take down ably and at speed whatever the sage uttered. Only Ganesha could perform the task, but he had a condition: "If my pen does not stop writing for a moment, then I will be your scribe," he told the sage, thus posing him a challenge of his own. The story is well loved by illustrators, especially today, and one often sees Ganesha portrayed as a scribe, busily writing on a pile of sheets that lie before him.

Most often, however, when he is portrayed alone, Ganesha is shown seated cross-legged, carrying the many objects associated with him, regarding the devotee benignly with those remarkably small but intelligent eyes. Great sculptures and paintings of Ganesha have been made in the past, most of them portraying him in his beneficent aspect. Nobody sees his figure as odd in any way, with the pudgy body of a child and the incongruously large head of an elephant,

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because he is seen not outwardly but inwardly by the devotee. But even when one regards these images closely, taking the form for granted, one is struck by the extraordinary ability with which the sculptors and the painters render Ganesha's ponderous form. The form apears light and utterly believable. Occasionally, the sculptor even takes up the challenge of showing Ganesha dancing, and then turns out perfectly delightful images in which the god seems to be amused himself at what he is doing. It is as if he were both actor and audience.

There are, of course, more solemn representations of the deity, especially when he is meant to be ritually invoked. A temple might have a carved slab with the figure of Ganesha inserted in the lintel just above the doorway; an illustrated manuscript or a series of paintings would begin with a leaf entirely devoted to Ganesha, accompanied by his two female companions, Riddhi and Siddhi, symbolizing prosperity and success, or sharing the space with the goddess of learning, Saraswati, seated atop a swan; his figure would be drawn on the wall in saffron or vermilion when preparations for a wedding are being made. And he would be summoned to come to the devotee's aid through the loud recitation of mantras, mystic syllables or verses in his honour. The devotee then thinks of Ganesha's axe which cuts through bonds, of his goad which takes one past delusion, or his rosary which helps to bring the mind, through prayer, to the sharpened point of concentration.

Ganesha is not only worshipped in India, but positively celebrated. Year after year, at a particular time, images of him are fashioned from clay, ranging from the very small to truly gigantic. Worship of him goes on in this form, and then on an appointed day he is taken out in a procession, in the midst of great chanting and singing – whole communities turning up and joining in – and taken to the waters for ceremonial immersion, accompanied by loud shouts urging him to return to his devotees again the next year. From formless clay he is formed, receives the breath of life through worship, and is then returned to formlessness again, thereby completing a cycle. But in essence, Ganesha is always there: ready to help, blessing an enterprise at the very beginning, and removing all obstacles that it might encounter on its way. When he is thus worshipped, the devotee summons divine assistance through the figure of Ganesha and acknowledges at the same time – ritually and devotionally – that his or her undertakings are but frail and vulnerable. What he needs is what Ganesha possesses in such ample measure: prudence, cleverness, wit, playfulness and sagacity. ○

Left: Ganesha with his consort and Saraswati, the goddess of learning. Leaf from an illustrated manuscript, Kashmir, c. 1800. Right: Dancing Ganesha, sandstone, 10th century; from Siron Khurd, Lalitpur District, Uttar Pradesh. At the beginning of any kind of undertaking he is invoked, as he knows how to remove the obstacles.

Ganesha mit seiner Gattin und Saraswati, der Göttin der Gelehrtheit. Aus einem illustrierten Manuskript, Kashmir, um 1800. Rechts: der tanzende Ganesha, Sandstein, 10. Jahrhundert; aus Siron Khurd, Lalitpur District, Uttar Pradesh. Man ruft ihn an, wenn man etwas unternehmen will, denn er räumt die Hindernisse aus dem Weg (und hält sich wohlwollend an wichtigen Punkten auf – wie etwa über Türen).

A gauche: Ganesha avec son épouse et Saraswati, la déesse du savoir. Page d'un manuscrit illustré, Cachemire, vers 1800. A droite: Ganesha dansant, calcaire, 10e siècle; provenant de Siron Khurd, région de Lalitpur, Uttar Pradesh. On l'invoque au commencement de toutes les entreprises car il est celui qui supprime les obstacles, par excellence et se tient avec bienveillance aux endroits cruciaux, au-dessus des portes des maisons qu'il protège.

GOVERNMENT MUSEUM JHANSI/PHOTO: JEAN-LOUIS NOU

Von Kriegs- und Salonelefanten

KLAUS BARTELS

Pferde «wiehern», Kühe «muhen», Schafe «blöken», Ziegen «meckern», Gänse «schnattern», Hühner «gackern», Hunde «bellen», Katzen «miauen» – und wie äussern sich die Elefanten inmitten dieses tierisch blöden Chors, der sich einzig durch derartige Lautmalerei beschreiben lässt? Sie «trompeten», und dies seit dem 4. Jahrhundert v.Chr., seit dem Eroberer Alexander und dem Zoologen Aristoteles. Die Elefanten verdanken dieses vornehme «Trompeten», das hier freilich durchaus nicht musikalisch, sondern vielmehr martialisch zu verstehen ist, den Soldaten der makedonischen Phalanx, die im Jahre 331 bei Gaugamela und Arbela, in der letzten «Alexanderschlacht» gegen den Perserkönig Dareios III., zum erstenmal indischen Kriegselefanten begegneten und sich bei deren «Kriegsruf» an den Laut der Kriegstrompete, griechisch *sálpinx,* erinnert fühlten; wenige Jahre später hat Aristoteles das «Trompeten» der Elefanten übernommen und so festgehalten.

In der Aristotelischen «Vergleichenden Morphologie» findet sich über dieses reizvolle «Trompeten» hinaus auch eine hübsche Erklärung des Elefantenrüssels und dazu einiges, das auf den ersten Blick wie Jägerlatein oder hier eher Söldnergriechisch anmutet:

«Von allen Tierarten hat der Elefant die am eigentümlichsten ausgebildete Nase; denn sowohl in ihrer Grösse als auch in ihrer Funktion ist sie aussergewöhnlich. Der Rüssel ist es ja, mit dem er alle seine Nahrung, ihn wie eine Hand gebrauchend, zum Maul befördert, wie die feste so die flüssige, und mit dem gleichen Rüssel reisst er ja ganze Bäume, ihn um die Stämme herumschlingend, aus dem Boden, und überhaupt gebraucht er ihn ganz wie eine Hand. Der Elefant ist nämlich von Natur gleicherweise sowohl Wasser- als auch Landbewohner; da er nun alle seine Nahrung im Wasser findet, als Landtier und Bluttier aber atmen muss, den Wechsel aus dem Wasser auf das Land wegen seiner Grösse aber nicht wie einige verwandte kleinere Gattungen jeweils rasch vollziehen kann, muss er gleicherweise sowohl im Wasser als auch auf dem Land leben können. Wie wir nun den Tauchern hie und da lange Atemschläuche anfertigen, damit sie während eines längeren Aufenthaltes unter Wasser durch diese Schläuche über Wasser die nötige Atemluft ansaugen können, so hat die Natur den Elefanten ihre langen Rüssel mitgegeben: So können sie doch, indem sie ihren Rüssel emporhalten, an der Oberfläche die nötige Luft holen, wenn sie ihren Weg einmal durch das Wasser nehmen müssen.

Da der Rüssel diese Funktion aber keinesfalls erfüllen könnte, wenn er sich nicht hierhin und dorthin beugen und schwenken liesse – denn sonst müsste er schon durch seine blosse Länge bei der Nahrungsaufnahme stören –, da dieser geschmeidige, gelenkige Rüssel also nun einmal da ist, gebraucht die Natur ihn zusätzlich – wie sie ja vielfach ein und dasselbe Organ zu mehreren Funktionen gebraucht – auch noch zu der eigentlich den Vordergliedmassen zukommenden Greiffunktion.

Denn die Riesengrösse und das Übergewicht des Elefanten erfordern es, dass die Vordergliedmassen in diesem Fall ausschliesslich dazu dienen, das Körpergewicht abzustützen; wegen ihrer Schwerfälligkeit und Ungelenkheit wären sie daneben zu keiner anderen Funktion zu gebrauchen.»

Kriegselefanten, wie sie durch den Alexanderzug sogleich zu Hunderten aus Indien, durch die Punischen Kriege später zu Dutzenden aus Afrika in den Westen und in den Norden kamen, haben in der Antike (und so bis heute) viel von sich reden gemacht. Diese aufgeputzten, turmbewehrten schwarzgrauen Kolosse haben mit ihrem Anstürmen und Durchbrechen wohl hie und da eine Schlacht, aber niemals einen Krieg entschieden. Nicht nur, dass die zum Kampfeinsatz eingefangenen Elefanten einer jahrelangen besonderen Dressur bedurften und dass die empfindlichen Tiere auf langen Märschen, zumal auf Gebirgsstrecken, nur höchst beschwerlich zu transportieren waren, sondern auch auf dem Schlachtfeld selbst erwiesen sie sich als eine zweischneidige Wunderwaffe. Gelang es dem Gegner, die oft mit Wein gedopten Tiere scheuen zu lassen – Feuerbrände und Schweineherden werden als probate Abschreckung genannt –, so konnten sie in den eigenen Reihen gerade so verheerend wüten wie unter den Feinden.

Als Pyrrhus, der König von Epirus, den römischen Konsul Curius im Jahre 275 v.Chr. bei Benevent zum Kampf stellte und dabei auch eine Gruppe Elefanten einsetzte, wurde ein Junges, das seiner Mutter in den Kampf gefolgt war, von einem Geschoss am Kopf getroffen und rannte schreiend vor

VILLA GIULIA, ROMA

Above: This elephant Amazon with her young one following her probably has to do with the Battle of Beneventum in 275 BC where a mother elephant that took fright helped the Romans to win their decisive victory over Pyrrhus. Right: In the spectacular triumphal processions of antiquity elephants drew the Carriage of Fame, thus representing the might of the ruler.

Oben: Diese Elefantenamazone mit ihrem Kind hinter sich erinnert wahrscheinlich an die Schlacht von Benevent im Jahre 275 v.Chr., wo eine durchgehende Elefantenmutter den Römern zu dem entscheidenden Sieg über Pyrrhus verhalf. Rechts: In den pompösen Triumphzügen der Antike wurden die Elefanten vor den Wagen der Fama (des Nachruhms) gespannt und repräsentierten so die Macht des Herrschers.

Ci-dessus: cette amazone-éléphant, suivie de son petit, évoque probablement la bataille de Bénévent en 275 av. J.-C. Lors de celle-ci, une mère éléphant qui s'était emballée aida les Romains à vaincre définitivement Pyrrhus. A droite: dans les pompeux cortèges des triomphes à l'antique, ils étaient attelés au char de la «Fama» (la gloire posthume), symbolisant la puissance du souverain.

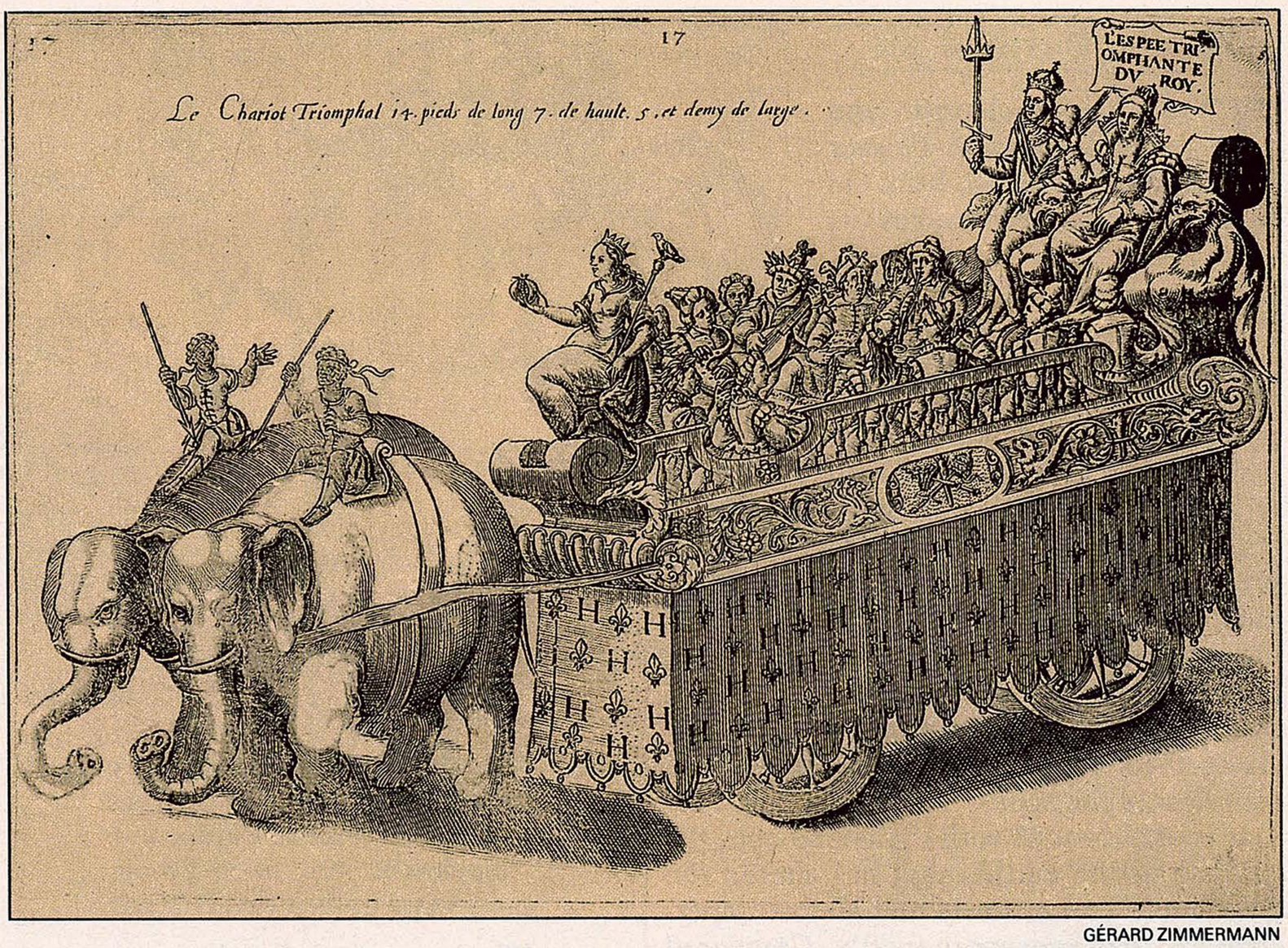
Klaus Bartels, Jahrgang 1936, Klassischer Philologe in Zürich, Autor der «Streiflichter aus der Antike» in der NZZ und der Sammlung «Sokrates im Supermarkt» (Verlag NZZ, 2. Auflage, 1987).

Schmerz davon; seine Mutter brachte daraufhin das zur Schlacht aufgestellte Heer des Pyrrhus vollkommen durcheinander. «So haben die gleichen Tiere», bemerkt ein späterer römischer Historiker, «die uns in der ersten Schlacht gegen Pyrrhus den Sieg genommen haben, uns diesen Sieg in der dritten Schlacht kampflos zufallen lassen.» Die grosse Schwerfälligkeit und die leichte Verletzlichkeit dieser grauen Riesen und nicht zuletzt auch ihre Unberechenbarkeit im entscheidenden Augenblick mag erklären, dass die in hellenistischer Zeit so gefürchtete und berüchtigte Elefantenwaffe in der römischen Kaiserzeit, als der Überraschungseffekt nicht mehr wirkte, ihre Bedeutung völlig verlor; einzig in Triumphzügen spielten prächtig aufgemachte, speziell dressierte Elefanten auch weiterhin buchstäblich noch eine «grosse» Rolle.

Und wie im Triumphzug, so in der Arena: Nachdem eben jener Konsul Manius Curius in seinem Triumph über Pyrrhus im Jahre 275 v.Chr. dem römischen Publikum erstmals leibhaftige Elefanten vorgeführt hatte, kam es mehr als zweihundert Jahre später, als die Elefanten zu kriegerischem Einsatz schon kaum mehr gebraucht wurden, in Rom auch zu einer ersten spektakulären Elefanten-«Jagd» im Amphitheater. Bei den fünftägigen Festspielen, mit denen Pompeius im Jahre 55 v.Chr. das von ihm gestiftete zehntausendplätzige «Pompeius-Theater» auf dem Marsfeld feierlich einweihte, wurden nach sechshundert Löwen und vierhundert anderen afrikanischen Grosstieren als noch nie gesehene unerhörte Hauptattraktion erstmals in Rom auch achtzehn Elefanten in der Arena zu Tode gehetzt. Von diesen Spielen besitzen wir eine höchst kritische Reportage aus erster und bester Hand: aus der spitzen Feder des grossen Cicero. Ironisch, ja sarkastisch berichtet Cicero zunächst von den so aufwendig wie geschmacklos ausgestatteten Theateraufführungen; betroffen und gerührt schildert er danach die in der Schau-«Jagd» auf die achtzehn Elefanten gipfelnden Tierhetzen:

«Den Abschluss der Spiele bildeten die Tierhetzen mit zwei Vorstellungen täglich, an fünf aufeinanderfolgenden Tagen grossartige Tierhetzen, keiner bestreitet das – aber wie kann ein empfindender Mensch Freude daran finden mitanzusehen, wie entweder ein schwacher, wehrloser Mensch von einem vielfach stärkeren Raubtier zerfleischt oder ein herrliches, prächtiges Wildtier in der Arena von einem Jagdspiess durchbohrt wird? ... Der fünfte und letzte Tag war der Tag der Elefanten. Während dieser Schlussvorstellungen schlug die Bewunderung in der grossen Menge zwar hoch empor, doch eine eigentliche Festesfreude wollte gerade an diesem Tag unter den Zuschauenden nicht aufkommen. Vielmehr stellte sich schliesslich allgemein sogar eine Empfindung des Mitleidens mit den gehetzten Elefanten ein und eine Erkenntnis in der Richtung, dass dieses vernunftlose, wildlebende Tier mit dem Menschengeschlecht wohl doch irgendeine Art von Gemeinsamkeit haben müsse.»

Für die Stifter solcher Spiele wie für die grossen Massen scheint diese so menschlich anrührende «Erkenntnis» kein langewährendes Hindernis für weitere Elefantenhetzen gewesen zu sein: Als Cäsar nur neun Jahre später seine offiziellen Triumphe über Gallien und Ägypten und die Könige Pharnakes und Juba feierte, feierte er zugleich einen inoffiziellen letzten Triumph über seinen Rivalen Pompeius, diesmal in der Arena: In



GÉRARD ZIMMERMANN

jenem Jahre 46 v.Chr. liess Cäsar nicht weniger als vierzig Elefanten, mehr als doppelt so viele wie seinerzeit Pompeius, in der Arena zu Tode bringen, und auch danach sind die Elefanten aus dem Programm des Amphitheaters nicht mehr verschwunden.

Die sprichwörtliche Gelehrigkeit der Elefanten führte nach den früheren militärischen nun aber auch zu allerlei artistischen Dressurakten. In seiner «Tiergeschichte» berichtet der Buntschriftsteller Aelian im 3. Jahrhundert n.Chr., aber sicher aus zeitgenössischen Quellen, über ein Elefantenballett, das Germanicus Caesar (15 v.Chr.–19 n.Chr.) aus jungen, in der Gefangenschaft geborenen Tieren seines Elefanten-«Gestüts» irgendwo in Latium hatte zusammenstellen lassen. Die im folgenden beschriebene Nummer würde auch heute noch dem Schweizerischen Nationalzirkus Knie, um nur ihn zu nennen, alle Ehre machen:

«Zwölf Elefanten an der Zahl bildeten damals das Ballett, und sie traten kunstgerecht von der einen und der anderen Seite der Arena her in zwei Abteilungen auf. Mit schwebenden, schwingenden Schritten, ihren ganzen Körper hin und her schwenkend, kamen sie herein, in Tänzerkostüme mit Blumenmotiven gekleidet. Und sobald der Ballettmeister ihnen nur mit halblauter Stimme ein kaum hörbares Zeichen gegeben hatte, stellten sie sich das eine Mal in Reih und Glied auf, wenn er ihnen dies befohlen hatte, und schritten das andere Mal im Kreis herum, wenn er dazu das Zeichen gegeben hatte, und wenn sie darauf wieder zur Seite einschwenken sollten, gehorchten sie auch diesem Befehl. Danach verstreuten sie Blumen um sich her und schmückten so die Manege ringsum aus, und auch das taten sie massvoll und sparsam. Währenddessen stampften sie immer wieder leicht mit den Füssen auf den Boden ...

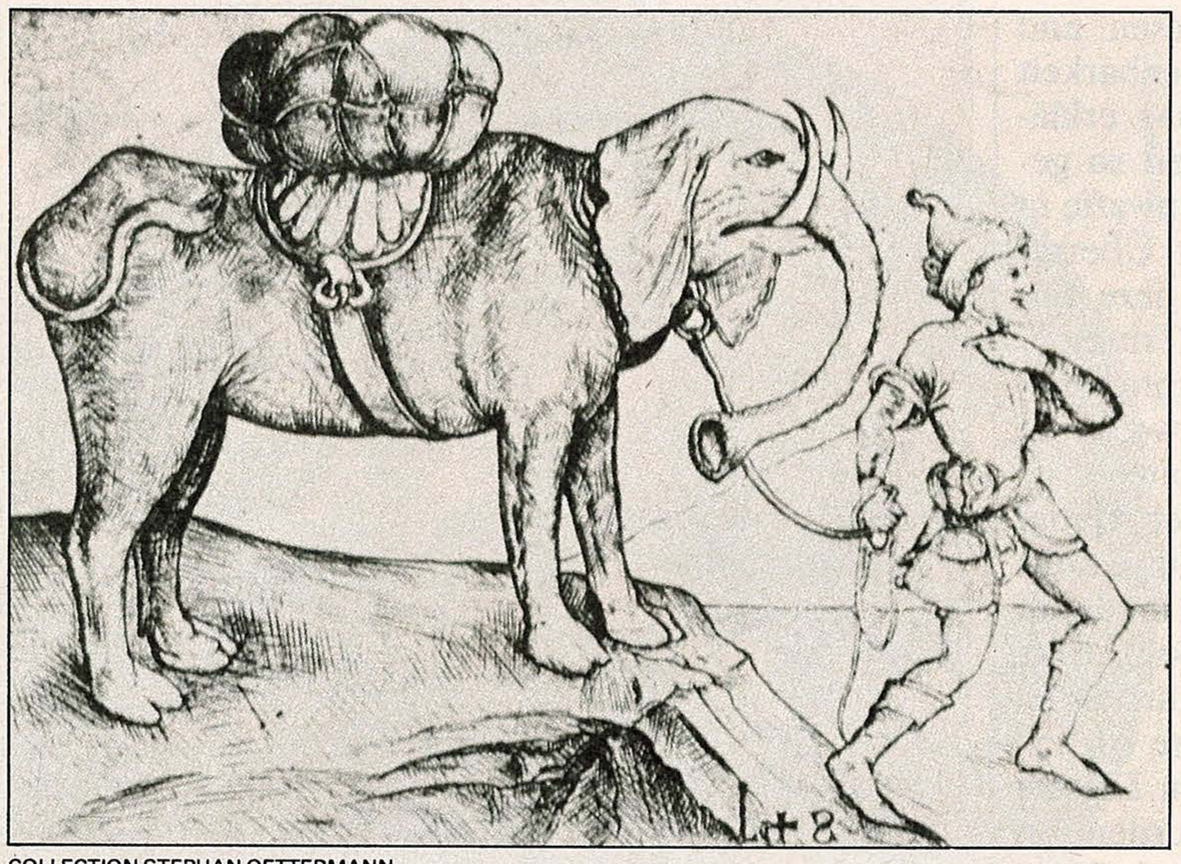
Doch was darauf folgte, reichte hin, die Zuschauer geradezu in Raserei zu versetzen. Riesige Strohmatratzen zu niedrigen Speisesofas wurden in den Sand der Arena gebracht; darüber wurden flache Kissen und darüber wieder bunte Decken gebreitet; die ganze Ausstattung stellte unverkennbar ein Haus von überaus grossem, seit alters überkommenem Reichtum vor. Kostbar gearbeitete Trinkgefässe wurden dazugesetzt und goldene und silberne Mischkessel, bis an den Rand mit Wasser gefüllt; prächtig gearbeitete Tische aus Zitrusholz und Elfenbein wurden aufgestellt; darauf waren grosse Mengen von Fleisch und Brot aufgetürmt, genug, auch die Mägen der unersättlichsten Tiere zu füllen.

Als schliesslich alles, was zur Vorbereitung eines üppigen Gastmahles gehört, vollständig und überreich bereit stand, traten die Gäste auf: sechs männliche und die gleiche Anzahl weibliche Elefanten. Die einen trugen Männer-, die anderen Frauenkostüme, und so legten sie sich nun in der schönsten Ordnung paarweise zu Tische, immer ein Herr und eine Dame nebeneinander. Auf einen leisen Zuruf hin streckten sie ihre Rüssel wie Hände ganz manierlich nach den aufgetragenen Speisen aus und speisten so mit vollkommenem Anstand; nicht einer von ihnen erweckte den Eindruck von Gefrässigkeit, als sei er etwa darauf aus, einem anderen einen Leckerbissen wegzuschnappen oder sonst mehr zu ergattern als die anderen. Und als man nach dem Essen dann zum Trinken überging, wurde neben jedem ein goldener Mischkessel aufgestellt; daraus zogen sie mit ihren langen Rüsseln das Wasser auf und tranken so vollkommen ordentlich. Am Ende spritzten sie noch die sie bedienenden Wärter nass, aber auch das im Übermut und spielerisch und ganz und gar nicht ungehörig.» ○

Decline and Fall of an Imperishable Idea

The Elephant's Trail through the Western World

STEPHAN OETTERMANN



COLLECTION STEPHAN OETTERMANN

Like the specimen portrayed by Ludwig Schongauer in 1482, most elephants came to Europe as "diplomatic gifts" of the Portuguese kings to their royal friends.

Wie das von Ludwig Schongauer 1482 porträtierte Tier kamen die meisten Elefanten als «diplomatische Geschenke» der portugiesischen Könige an Fürstenhöfe nach Europa.

Comme l'animal représenté en 1482 par Ludwig Schongauer, la plupart des éléphants envoyés en Europe étaient des «cadeaux diplomatiques» des rois du Portugal à leurs amis princiers.

The Swiss scientist and zoologist Konrad Gesner knew about it back in 1629: "The elephant takes its name from the mountain of Elephas, because it is a large animal, a sort of mountain."

A sort of mountain, and nearly as old. An animal out of the mists of the past, older than man. Biologists have discovered as much from serological studies: the elephant is one of the primeval land-dwellers. In the millions of years through which the elephant has left its trail across emerging and vanishing continents, it has remained unchanged and true to itself: a living rock in the slow flow of the aeons.

It is only contact with the naked ape, the "plague of the earth", that has altered the elephant. At first slowly and almost imperceptibly, then ever more swiftly. Compared with the huge span of its existence hitherto, the years that the elephant has shared with the human race have been brief indeed. Yet they have been enough to change the seemingly unchangeable and to turn the dignified giant into a circus clown. The history of the elephant has become the story of its downfall.

It is only 6000 years since the elephant was tamed in India to help in the clearance and cultivation of the land. Some 4000 years later it appeared on the edge of Europe as an auxiliary in the armies of Alexander the Great. And another thousand years were to pass before it reached the centre of the Christian West. It was there found to be huge, marvellous and fear-inspiring. The first elephant that crossed the Alps into northern Europe was called Abulabaz. It was a gift of the great Caliph Harun al-Rashid of Baghdad to Charlemagne. Hung with carpets and bedizened with gold and pearls, the enormous animal arrived in Aix-la-Chapelle in 801. Only two years later, when it was to be used for "psychological warfare" in a campaign against the heathen Frisians, it was drowned in the Rhine.

The next elephant came to Europe in 1228, this time a gift of an Ayyubid sultan to the Emperor Frederick II. Together with a menagerie of other exotic beasts, this elephant accompanied the emperor on his trips through the German and Italian palatinates. In 1237, after Frederick's glorious victory over the Milanese forces at Cortenuova, the elephant headed the triumphal entry of the Stauffer emperor into the city, pulling the *carroccio,* the captured carriage with the Lombard insignia, through streets lined with jubilant spectators.

Elephants were in those times what falcons and panda bears are today – the preferred tokens in the game of international politics. It was the kings of Portugal who perfected the originally Oriental idea of the "diplomatic elephant". One of the animals that they sent from Lisbon to German emperors between 1460 and 1563 was Soliman. The route it took through North Italy, the valleys of the Adige and the Isarco, over the Brenner Pass and down the Danube to Vienna, can still be followed by the "Elephant" inns at which it was stabled. After a journey lasting nearly a year Soliman reached Vienna safely on 6 March 1552. Its entry into the city became a triumphal procession, accompanied by unsurpassed pomp and splendour. The Portuguese of course got what they wanted: Maximilian II, who favoured their cause, and not Philip of Spain, the real pretender to the throne, became King of Rome.

Probably the most successful of "diplomatic elephants" was Hanno, which Manuel the Fortunate of Portugal sent to Pope Leo X in Rome in 1514, together with the famous rhinoceros which Dürer made a drawing of. The two heavy beasts were to throw their weight into the Portuguese scale in the forthcoming partition of the world between Spain and Portugal. The rhinoceros was washed overboard during transport and reached Rome only as a stuffed relict. But Hanno, magnificently caparisoned, entered Rome through the Porta Flumentana. In front of the Castel Sant' Angelo Hanno kneeled three times before Pope Leo. And that was what chiefly decided the partition of the world, for up to that time the belief had prevailed – and had been backed by the authority of the writers of antiquity – that the elephant had no knee joints and therefore could not kneel. Yet the ambling mountain kneeled before God's deputy on earth. It was a miracle, and an act of homage that did not fail to have the desired effect: the Portuguese received the more golden of the two Indies. When the elephant refused to kneel before the cardinals and, instead of doing homage to them, sprayed them with water, Leo X was so delighted that he had Hanno painted by Raphael. Martin Luther, the heretic of the far north, might pour scorn on the Pope's soft spot for elephants as long as he wished, Leo X remained devoted to Hanno and was disconsolate when, in a later triumphal procession, the elephant was asphyxiated by his ornamental gilding.

But in 1626 the grand role of the elephant as a ruler's pet came to an end. Hansken, who now made his appearance on history's stage, was a new type of elephant. He could be distinguished at a glance from his gilt and blue-blooded predecessors, for he was only "mousy". A certain Mijnheer Sevender had bought him for a fair price in Ceylon to present him to an open-mouthed public in France and Holland, in Germany, Italy and France again, and finally in England, for twenty-five years in all. And since he had cost money, Hansken – unlike the luxury pets of emperor, king and pope – had to earn his living and that of his owner too. Instead of marching proudly at the head of a triumphal procession, he had to do "useful work", swinging a flag like a trooper, shooting off a pistol, sweeping the floor with a broom, bringing water in a pail, and so forth. Hansken was the first proletarian among the elephants. Bernini, who saw him in Rome in 1630, raised a monument to him in the Piazza

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della Minerva, where an elephant supports an obelisk. As "trained elephants" Hansken and his successors, who obeyed their owner's commands, who were docile and quick to learn, superseded the earlier European concept of the elephant as a magnificent showpiece.

The elephants that now began to appear on the fairground not only attracted the public but drew forth comment from writers and scholars, inaugurating in the seventeenth century an elephant literature in its own right. This culminated in 1723 in the bulky *Elephantographia curiosa* by D. Petri ab Hartenfels. It was a wonderful Baroque compilation from the Bible, ancient writers and contemporary travel books, and everything accessible ever written about the elephant was contained in it: the elephant is chaste, meek, has no knee joints, has its testicles in its head, lives to be a hundred, and its excrement, smeared on the skin or smoked, drives off lice and fleas. It was a great omnium-gatherum of all sorts of pseudoscientific information with the aim of enabling the true elephant to be reconstructed from all its heterogeneous facets and self-contradictory attributes, whether relating to the nature of its body, to its divine purpose, its virtues, its uses as an instrument of warfare when alive, or as a medicine when dead. The real elephant that could be seen at the fair was only the cause but not the object of the compilation, for its formidable reality would only have disturbed the image created for the paper elephant:

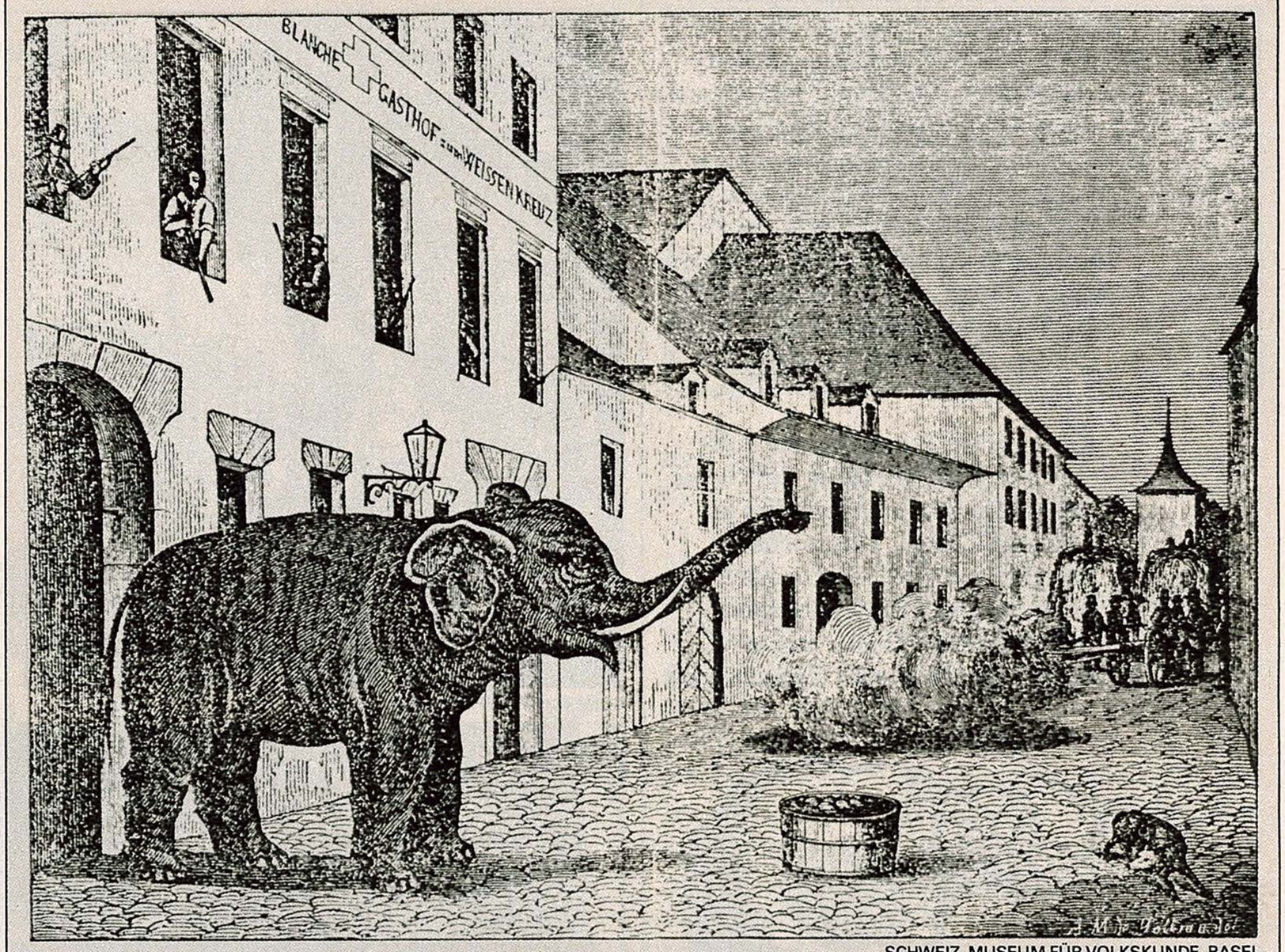
"This mighty beast, endued with boundless power,
Will do his master's bidding by the hour;
But thou, vile man, wilt hear no parson's word
To love thy neighbour, or to serve the Lord."

It was in fact parsons and pious commentators who drew the moral from this compilation of humanistic scholars. The lazy and profligate common people, they said, should take the allegedly meek, chaste, sober and obedient elephant as an example. "If there is among all unreasoning animals," wrote Daniel Ernsten in 1675, "one that could be set before man as a useful teacher of moral behaviour, it is surely the elephant."

Fortunately allegories never prevail for long among the vicissitudes of reality. Gucciardini writes, appalled, about an elephant he saw in Antwerp in 1563: "The splendid attributes and rare qualities so often reported by the writers of antiquity are not to be found in this animal. It behaved like a pig, gulping down everything that was thrown to it, and once drank so much wine that it lay like dead for a full twenty-four hours, but when it had slept off its drunkenness it ate more than ever before." Yet if the elephant had a quality that really pleased the general public, it was precisely its hearty appetite for all kinds of food and drink. It was that, rather than meekness or chastity, that made it a figure the common folk could identify with. Scholars could pass on their image of the moral model in their books, but the people found their own way of perpetuating their view of their favourite animal. Till far

Das Schicksal eines Wanderzirkuselefanten im 19. Jahrhundert

Ende Juni 1866, Murten/Schweiz, eine mittelalterliche Kleinstadt mit See, einer Ringmauer, für deren Abbruch das Geld fehlte, 2300 Einwohnern, die von Handwerk und Handel lebten, etwas Uhrenindustrie in der Nachbarschaft, einer eigenen Zeitung und Erinnerungen an Karl von Burgunds gegen die Eidgenossen verlorene Schlacht. Eine Eisenbahn bestand noch nicht, wurde aber geplant. Es war hier seit der denkwürdigen Schlacht im Jahre 1476 nicht mehr viel geschehen, und es gab im Alltag zweifellos Einerlei und Langeweile.



SCHWEIZ. MUSEUM FÜR VOLKSKUNDE, BASEL

Entsprechend verhiess die Ankunft des amerikanischen Zirkus Bell & Myers mit dressierten Pferden und einem Elefantenpaar, das in den Stallungen des Gasthofs Kreuz in der Rathausgasse untergebracht wurde, eine willkommene Abwechslung. Elefanten waren in unseren Breitengraden zu diesem Zeitpunkt immer noch eine Sensation; man kannte sie nur vom Hörensagen, und als Zirkustiere waren sie eine Neuheit. Und nicht nur das: Hier in Murten löste einer der Elefanten Ereignisse aus, die im Städtchen eineinhalb Jahre Verwirrung schufen und bis heute nicht vergessen sind. Als nämlich nach der Aufführung, beim Aufbruch der Truppe im Morgengrauen, der Elefantenbulle, der während 15 Jahren folgsam gewesen war, unerwartet wütend wurde, seinen Kornak tötete, aus dem Stall entfloh und zum Entsetzen der Bevölkerung in den Gassen tobte, war die gewohnte Welt aus den Fugen. Immerhin gelang es den Zirkusleuten und beherzten Männern von Murten schliesslich, das Tier in den Stall zu locken und dort einzusperren. Das plötzlich unberechenbare Verhalten des Elefanten brachte den Zirkusdirektor und die Stadtväter in solche Verlegenheit, dass sie sich entschlossen, in Freiburg eine Kanone anzufordern und das zwar bewunderte, doch für gemeingefährlich gehaltene Tier zu erschiessen. Die Kanone traf um 11 Uhr ein, Artilleriehauptmann Daniel Stock übernahm das Kommando, und als es kurz nach Mittag gelang, den Bullen aus dem Stall zu locken, brachte ihn der geschickte Artilleur mit einer einzigen Kugel zur Strecke.

Doch selbst das war erst der Anfang der Geschichte: Die Kunde davon verbreitete sich mit Windeseile, und das Volk lief rasch aus der ganzen Region zusammen, um das exotische Monster wenigstens noch tot aus nächster Nähe zu sehen. Am Tage darauf wurde es von den einheimischen Metzgern Riesemey und Fasnacht in aller Form ausgehäutet, das Fleisch in Stücke gehauen und das Pfund zu 20 Centimes ausgewogen. Es fand reissenden Absatz; bis nach Neuenburg wurde davon verkauft.

Die Stadtbehörde, zu der einige kluge und gebildete Köpfe gehörten, erwarb die Haut und liess sie für das Naturalienkabinett ihrer Schule ausstopfen. Als sie feststellte, dass das Tier den vorgesehenen Raum bei weitem sprengen würde, entwarf der Architekt Friedrich Salvisberg einen schmucken Elefantenpavillon. Schliesslich wurde aus allem nichts. Im Stadtrat gewannen ob der vielen Umtriebe und Unkosten die Sparer und Biedermänner die Oberhand, und das Unglück passierte: Nach eineinhalb Jahren mutiger Kultur- und Bildungspolitik (wie man heute sagen würde) wurde das inzwischen fertig präparierte Tier dem Naturhistorischen Museum in Bern verkauft, dessen Direktor seit langem nach einer Elefantenhaut Ausschau gehalten hatte. Der Transport nach Bern muss ein Spektakel ganz besonderer Art gewesen sein. Das Präparat wurde erst vor wenigen Jahrzehnten vernichtet. Das Skelett dagegen, welches vom Anatomischen Institut der Universität Bern gleich nach der Erschiessung des Elefanten erworben worden war, wird in Bern bis heute aufbewahrt. So kam auch die Wissenschaft zu ihren Trophäen.

Die Murtner haben ihren Elefanten nicht vergessen: Die Gasse, in welcher er getötet werden musste, heisst noch heute im Volksmund Elefantengasse, und Kugeln, mit der er erlegt worden sein soll, werden gleich zwei aufbewahrt. (Obwohl es geschichtlich belegt ist, dass nur ein Schuss abgegeben wurde.) Reliquien haben die Kraft der Vermehrung! Und fremdenfeindlich waren die Murtner auch nicht: Der vom Elefantenbullen getötete Kornak wurde auf dem eigenen Friedhof begraben, der Männerchor sang ihm ein schönes Lied, und gute Christen mit Sinn für Exotik liessen dem Fremdling einen Grabstein setzen.

H.S.

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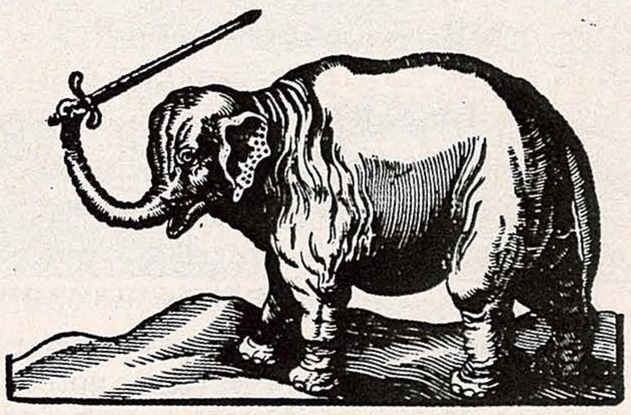
The last elephants in our zoos and circuses are the sad trophies of our successful subjection of nature. The next millennium will know them only from books and museums. The gentle giant: like a lamb to children, he let them ride on his back. He was even ready to behave like his human captors and acted the clown for them in the circus. He bore the curiosity of scholars, who in the end dissected him. Opposite: This picture story from Munich anticipates a thing that the 19th century, in its fascination with progress, had long been waiting for: the clash of technology and the animal world. On 15 September 1885 an elephant collided with a steam locomotive.

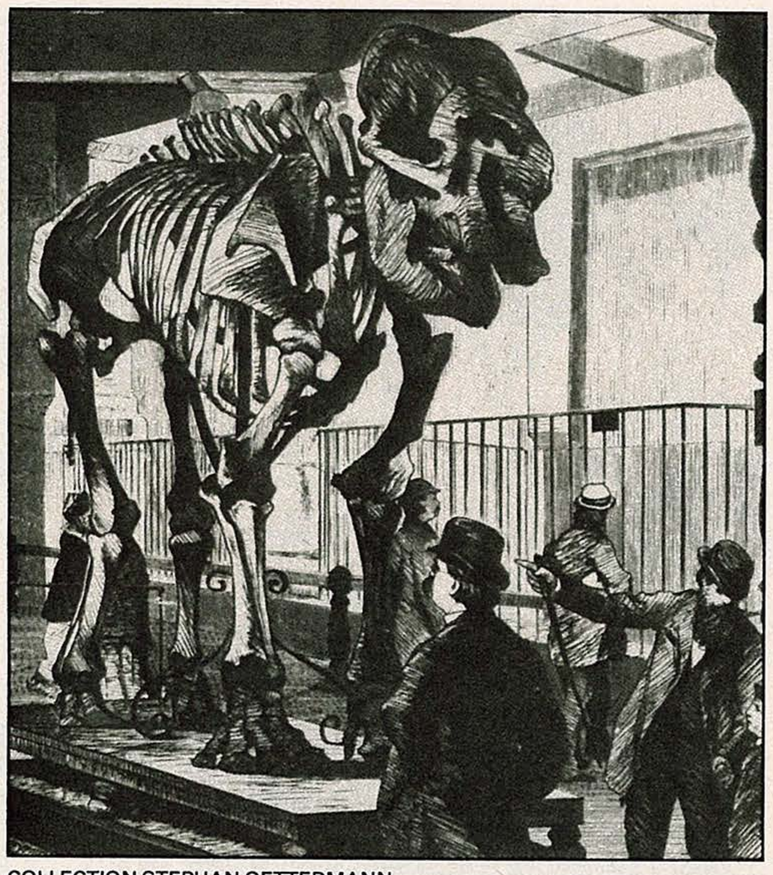
Als traurige Trophäen der vollzogenen Unterwerfung der Natur stehen die letzten Elefanten in Zoo und Zirkus. Das nächste Jahrtausend wird sie nur noch aus Büchern und Museen kennen. Der gutmütige Riese: lammfromm war er zu den Kindern und

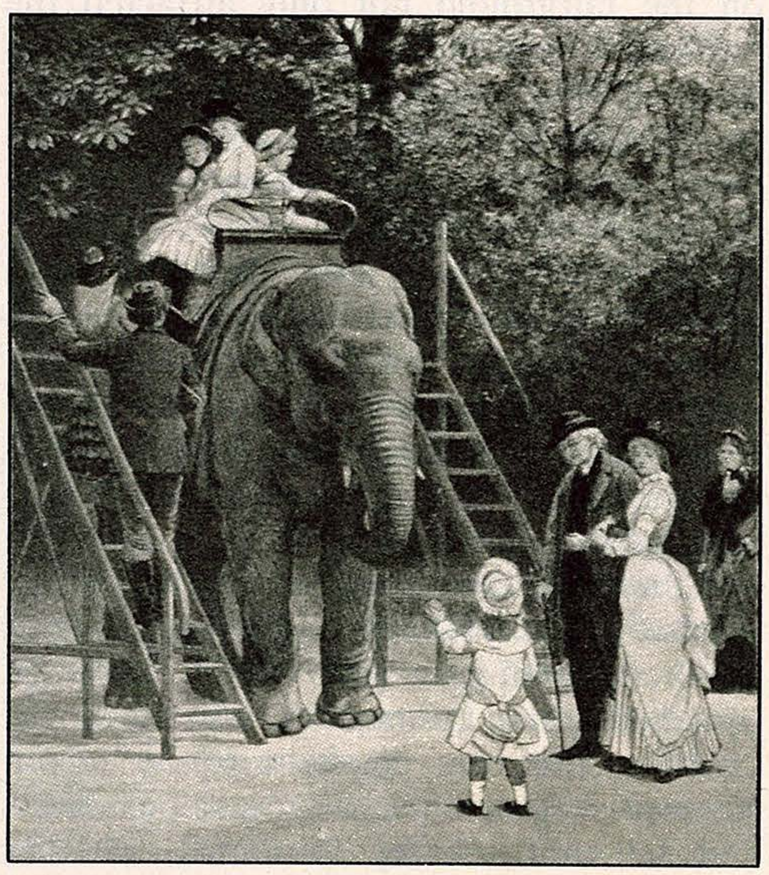


liess sie auf seinem Rücken reiten. Er liess sich sogar herab, sich wie ein Mensch zu benehmen, und spielte im Zirkus den Clown. Selbst noch die Neugier der Gelehrten, die ihn bis auf die Knochen sezierten, ertrug er ohne Murren. Rechte Seite: Der Münchner Bilderbogen nimmt vorweg, worauf das vom Fortschritt faszinierte 19. Jahrhundert schon lange gewartet hatte: den Zusammenprall von Tier und Technik. Am 15. September 1885 stiess ein Elefant mit einer Lokomotive zusammen.

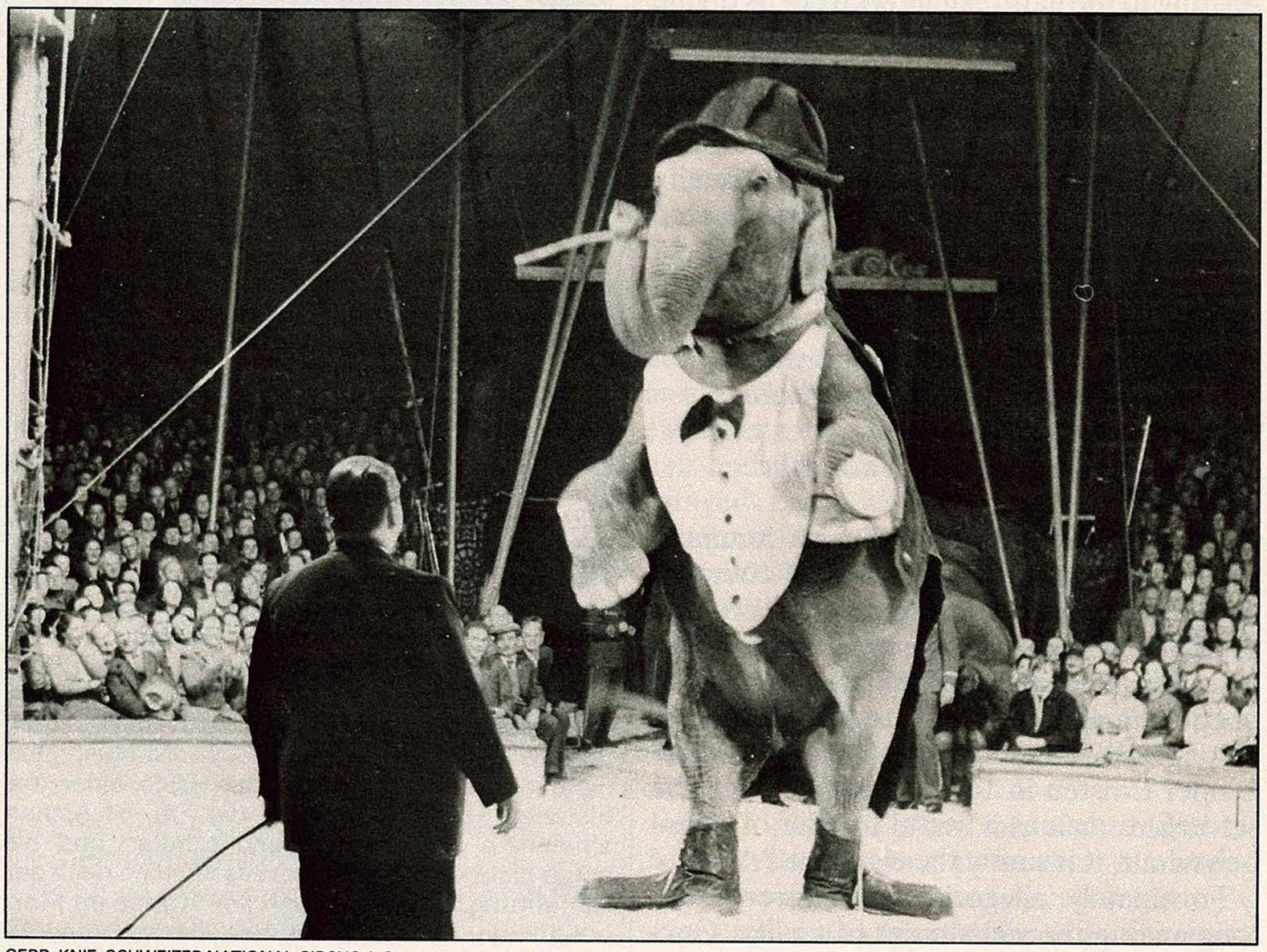
Les derniers éléphants des zoos et des cirques restent comme de tristes trophées de la soumission complète de la nature. Au 21e siècle, on ne les découvrira plus que dans les livres et les musées. Le bon géant: il était doux comme un agneau avec les enfants et les laissait le chevaucher. Il s'abaissa même à singer l'homme et à faire le clown au cirque. La curiosité insatiable des savants, qui le disséquèrent jusqu'aux os, il la supporta sans renâcler. A droite: cette page d'images munichoise anticipe, ce que le 19e siècle, fasciné par le progrès, attendait depuis longtemps: le choc de l'animal et de la technique. Le 15 septembre 1885, un éléphant entrait en collision avec une locomotive.

into the nineteenth century the feasting, drinking and dancing elephant was a feature of every performance. And as for the supposed chastity of the elephant, once the species became more numerous in Europe in the early nineteenth century, it became a popular Sunday afternoon pastime for the Viennese to watch the copulatory activities





COLLECTION STEPHAN OETTERMANN



GEBR. KNIE, SCHWEIZER NATIONAL-CIRCUS A.G.

of the pair of elephants kept at Schönbrunn.

In the eighteenth century the elephant underwent another change. In its attempt to get to the "real" elephant under the mass of rumour and surmise, the new natural science took a radical line: it penetrated through the mountain of flesh to the hard core, the skeleton, bared it, cleaned it and bleached it, and then built it up again into the true elephant. The hunger for knowledge that inspired the eighteenth century was keener than that of the men of universal learning of the Baroque era: all that was now left of the marvel of the animal world was the logic of its bone structure. But common folk formed their own picture with what was left over from the dismemberment of the allegorical elephant. Opinions on elephants that go back to antiquity and have long been discarded by the serious scientist have lived on to the present day in the children's book, in the comic and in advertising.

From the arrival of Abulabaz in Aix-la-Chapelle in 801 till the end of the eighteenth century, no more than 31 or 32 elephants had reached Europe. But then the great inflation began. In the first half of the nineteenth century twice as many elephants were imported as in the previous thousand years. The author of the *Elephantographia curiosa* had considered himself lucky at the end of a long life devoted to elephant research to see a living pachyderm with his own eyes, at a time when he had already given up hope of ever doing so. But by the beginning of the industrial age the elephants had become a rather common-or-garden sensation. A simple elephant that swept the floor or turned a barrel-organ was no longer likely to entice paying spectators into the travelling menageries. Under the pressure of growing competition the owners of elephants had to spur on animals that were no longer marvels in themselves to ever more marvellous feats.

In 1816 the famous round platforms were introduced in the Cirque Franconi in Paris. The balancing act of the huge animal on the small pedestal, so unexpected in view of its heavy and seemingly clumsy body, set the course for yet another transformation.

In 1846 an elephant in England was taught to walk the tightrope, in 1853 the first speci-

Lord Byron reported on a great commotion caused when an elephant broke loose, devoured the contents of a fruit-stall and killed its attendant. From that time on the sensational accounts of elephants that had trampled people to death, had hurled them through the air or impaled them on their tusks were never to break off again.

On 15 September 1885 came the event for which the age of progress had long been secretly waiting: the confrontation of nature and technology. Jumbo, the elephant of flesh and blood, met the elephant of the technical world, the steam locomotive, head on. The elephant paid with its life, but for once it also won a moral victory: the locomo-

tive was derailed! But this victory was the final downfall of the elephant. The remains of the specimen concerned can be seen in the Museum of Natural History in New York, while the remains of its species now vegetate in the world's zoos. They have lost their dignity for ever. They are now only the sad trophies of progress.

The history of the elephant in the West runs from the fear-inspiring Abulabaz via the royal beast that headed triumphal processions, the trained elephant, the model of morality, the dismembered skeleton, to the colossus standing on its head and the giant toy of children. It is the story of progressive humiliation.

Some may of course see men's triumph over nature symbolized by the fact that we have turned the grey giant out of the earth's past into a museum exhibit, the ambling mountain into a polished billiard ball. Yet for all the striking difference in appearances, there is a deep, secret kinship between the elephant and man. In India, where the elephant Ganesha is a god of wisdom, this animal is regarded as the essence of man's humanity. Buffon, the great eighteenth-century zoologist, was aware of the fact: "The elephant is, if we leave ourselves out, the most important creature on earth." Many of us have sensed the close bonds between elephant and man and have chosen it as our favourite animal. Some of us would even like to be elephants.

Yet the fate of this species in our own century is an apocalyptic vision. The elephant faces extinction. The brisk trade with ivory, and even more so the systematic destruction of the elephant's living-space make it fairly certain, in the opinion of the Cambridge biologist Stewart Eltringham, that the most human of animals will not live to see the next millennium.

Acquaintance with Western man, however close the latter feels to his bigger earth-dwelling companion, has done the elephant no good.

What will the world be like without the profound, prehistoric wisdom of the elephant? The philosopher Arthur Schopenhauer told us: "The idea of the elephant is imperishable." But who will be comforted by that? ○

Der Elefant ist los!

CIRCUS
Im Zirkus war ein Elefant
Ob seiner Künste allbekannt;
Der hat einmal, eh' man's gedacht,
Sich von der Kette losgemacht.
Er tritt zum Zirkustor heraus,
Und alles flieht voll Furcht und Graus;
Selbst Roß und Reiter kommen gar
Durch seinen Anblick in Gefahr.
Sein erster Weg ist — o Skandal!" —
Sogleich nun in ein Wirtslokal,
D'rinn', wie im Zirkus er's geübt,
Mit Flaschen er sein Kunststück gibt.
Doch niemand weiß dafür ihm Dank,
Man flüchtet unter Tisch und Bank;
Darob bekömmt er lange Weil'
Und geht und denkt sich seinen Teil.
Vergnüglich wandelt er in Ruh'
Der nahen Eisenbahn jetzt zu,
Und klopft so höflich als er kann,
Vor des Bahnwärters Häuslein an;
Der aber starrt den selt'nen Gast
Mit Grauen an und flieht in Hast.
Das nimmt der Elefant ihm krumm
Und legt dafür sein Häuslein um.
Das Häuslein liegt, der Elefant
Stellt auf den Kopf sich kunstgewandt,
Holt den entfloh'nen Wärter ein,
Und nimmt ihn auf den Rücken sein.
Das Fähnlein schwingend mit Bedacht,
— Wie er's im Zirkus oft gemacht —
So stellt dem nah'nden Eilzug sich
Er jetzt entgegen mutiglich.
Der Bremser bremst noch früh genug,
Und rettet so — Gottlob — den Zug.
Feuer-Glocke
Der Elefant, darauf dressiert,
Zu läuten, wenn er Hunger spürt,
Zieht, hungrig, wie er ist, nun schnell
Die — Feuerglocke, dröhnend hell;
Und alles rennt von fern und nah,
Die Feuerwehr ist auch gleich da;
Mit Hilfe der Gendarmerie
Fängt bald den Elefanten sie,
Der dann, an seines Führers Hand,
Den Weg zurück zum Zirkus fand. —
Und die Moral von der Geschicht':
„Tu' immer nur, was deine Pflicht!"

COLLECTION STEPHAN OETTERMANN

men stood on its head, not long after that an elephant could be seen riding a bicycle and doing a single-armed handstand. The impossible had thus been made possible – by man, not by the elephant. The heaviest and most imperturbable of animals, the ambling mountain from the mists of the past, had been forced into a feather-light, labile equilibrium. It was not the elephant, it was nature itself that here seemed to be standing on its head.

For a thousand years the elephant had put up with the whims of humans. There is nothing in the chronicles about specimens that showed any determined resistance. Yet in the end the animal seemed to realize what a mean game mankind had been playing with it.

In a letter from Venice dated 6 April 1918

The king of all elephants was called Jumbo. Over 3.3 metres high at the shoulder, and weighing nearly 6½ tonnes, he was the largest and most powerful elephant of all time. In this paragon of his kind the destiny of the elephant in the Western world was to be symbolically fulfilled. In the 25 years of his life, Jumbo allowed over a million children to ride on his back, first in Regents Park in London, later in the United States. *Harpers Weekly* wrote that Jumbo was as gentle with children as the best-trained poodle. He earned the name of "the charming giant pet". He was the perfect counterpart to Abulabaz. And like Abulabaz he found his place in history: his name became not only the name of all elephants, but of everything outsize and likeable.

Vom «Plumpen Säugethier» zu Babar

Elefanten im Jugendbuch und im Kinderzimmer

THEO GANTNER

Wie stellte sich ein mitteleuropäischer Lateinschüler des 16. Jahrhunderts die Elefanten Hannibals vor, die er durch die Lektüre kennenlernte? Es ist sehr unwahrscheinlich, dass er damals ein lebendes Exemplar mit eigenen Augen zu sehen bekam. Seit der Zeit Karls des Grossen vergingen über 700 Jahre, bis gegen Ende des 15. Jahrhunderts einige wenige – vielleicht waren es zwei oder vier – dieser exotischen Tiere nördlich der Alpen Staunen und Bewunderung bei den Bewohnern jener wenigen Orte hervorriefen, in denen die Tiere zu sehen waren.

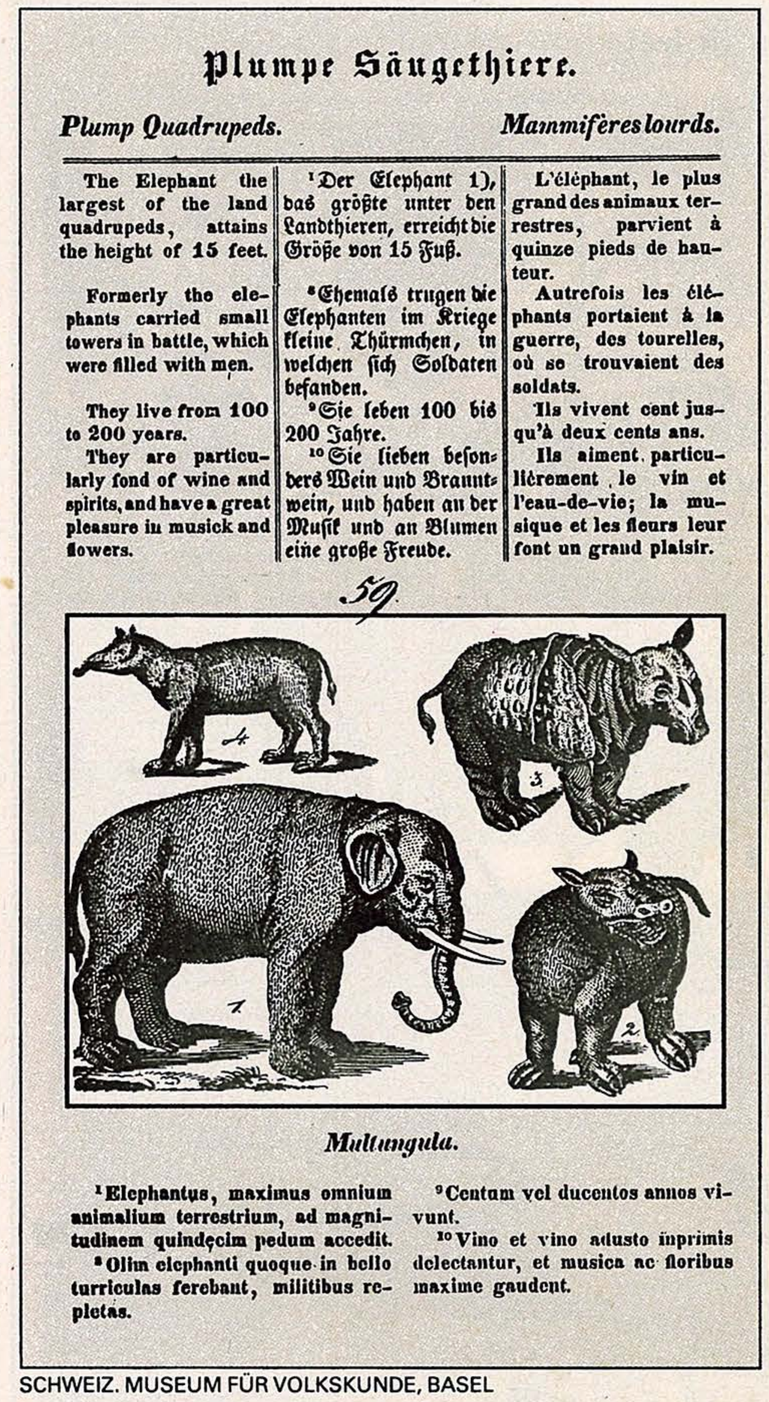
Zur Beschreibung der Elefanten und anderer merkwürdiger Tiere standen dem Lateinlehrer allerdings einige Hilfsmittel zur Verfügung, von denen zweifellos eifrig Gebrauch gemacht wurde. Zunächst konnte auf die Bibel verwiesen werden. In den beiden Makkabäerbüchern ist von Elefanten in Ägypten die Rede, die wie bei Hannibal für die Kriegsführung eingesetzt wurden. Zur äusseren Gestalt wird aber kaum etwas ausgesagt. Vielleicht gab es jedoch in der Klosterbibliothek eine illustrierte Ausgabe des «Physiologus» oder eines anderen «Bestiariums». In diesen bis ins 15. Jahrhundert verhältnismässig oft kopierten Naturkundebüchern waren antike Berichte von wirklichen und sagenhaften Eigenschaften der Tiere zu lesen. Auch der Elefant gehörte zum Repertoire dieser Bücher. Dessen bildliche Darstellung war in diesen Bestiarien allerdings mehr von phantastischen Eigenschaften, die diesen Riesentieren zugeschrieben wurden, als vom tatsächlichen Aussehen geprägt, hatten doch die wenigsten Kopisten selber je einen lebenden Elefanten gesehen. Nicht nur die Beschreibungen wurden von den Bearbeitern mit Zusätzen ergänzt, sondern auch das äussere Bild hat sich mit der Zeit durch das Um- und Abzeichnen von der Wirklichkeit eher entfernt als ihr angeglichen.

Am Beispiel der Elefanten-Illustrationen in Lehr- und Schulbüchern lässt sich verkürzt darstellen, wie sich der «Schulunterricht» seit der Zeit der Bestiarien, also etwa in den vergangenen fünf Jahrhunderten gewandelt und entwickelt hat. Das Auftreten von lebenden Elefanten gegen Ende des 15. Jahrhunderts nördlich der Alpen wurde von Zeichnern und Malern als Gelegenheit wahrgenommen, den bisherigen Bildzeugnissen ein durch die Anschauung korrigiertes und wahrheitsgetreueres Abbild entgegenzusetzen. Die damals mögliche Bildreproduktion durch den Holzschnitt setzte allerdings einer Verbreitung neuer Vorstellungen enge Grenzen. Nur langsam änderte sich mit dem naturgetreueren Bild auch die Meinung von den Eigenschaften der Tiere. Die Erläuterungen über die «Natur», über die Erde, über Pflanzen und Tiere, waren eingebettet in die Darstellung des göttlichen Heilsplans. Die Eigenschaften der Tiere insbesondere wurden wie die menschlichen beschrieben und entsprechend gewertet. So gehörte der Elefant dank seiner Grösse und Stärke zu den nützlichen Tieren, die den Menschen behilflich sein können.

Nicht eine naturwissenschaftliche Systematik wurde gelehrt, sondern eine auf den Menschen bezogene Ordnung, als Bestandteil des grossen Heilsablaufes. Diese Ordnung der Natur und der Welt als Gesamtes, in der immer auch der Elefant als besonders merkwürdiges Tier seinen Platz hatte, wird deutlich sichtbar in der Kategorie der Unterrichtsbücher für Jugendliche, die man heute zur Reihe der Sachbücher zählen würde. Mit gutem Grund gilt der «Orbis pictus sensualium» von 1658 als das erste Sachbuch der Jugendliteratur. Der deutsche Titel dieses illustrierten Buches über die «gemalte Welt» von Johann Amos Comenius (1592–1670) heisst: «Die sichtbare Welt/Das ist Aller vornemsten Welt-Dinge und Lebens-Verrichtungen/Vorbildung und Benahmung». Der religiöse Pädagoge und Philosoph Comenius hatte als erster eine Gesamtschau der Welt für den Schulunterricht geschaffen. Neu war, dass das möglichst vollständige Wissen der Zeit in Wort und Bild für Jugendliche zusammengefasst und gleichzeitig in eine herkömmlich geordnete religiöse Weltschau gebracht wurde: Die ersten Kapitel handeln vom Schöpfer des Himmels und der Erde, und am Ende des Unterrichtswerkes wird als Erfüllung der Weltbetrachtung das Jüngste Gericht gezeigt.

Die Beschreibung der Bilder geht von der Benennung der einzelnen Dinge aus und ist schon in der ersten Ausgabe zweisprachig, deutsch und lateinisch. Sowohl den Titel «Orbis pictus» als auch die Gegenüberstellung von Wort und Bild haben Dutzende von Autoren später übernommen. «Bilder-Galerien», «Bilder-Akademien» und «Real-Lexika» in grosser Zahl imitierten im Verlaufe des 17. und 18. Jahrhunderts das Konzept von Comenius, wenngleich die späteren Autoren den Stoff des zeitgemässen Elementarwissens über die Welt im Zuge der Aufklärung in «naturwissenschaftlicher Systematik» ordneten.

Der Elefant kommt im Orbis Pictus von Comenius selbstverständlich vor, und zwar als ein dem Menschen nützliches «Last-Vieh», zusammen mit dem Esel, dem Maulesel, dem Pferd und dem Kamel: «Der Elefant/ziehet das Futter an sich mit dem Risel/ hat zwey hervorragende Zähne/und kan tra-



Plumpe Säugethiere.

Plump Quadrupeds. — *Mammifères lourds.*

The Elephant the largest of the land quadrupeds, attains the height of 15 feet.

Formerly the elephants carried small towers in battle, which were filled with men.

They live from 100 to 200 years.

They are particularly fond of wine and spirits, and have a great pleasure in musick and flowers.

[1]Der Elephant 1), das größte unter den Landthieren, erreicht die Größe von 15 Fuß.

[8]Ehemals trugen die Elephanten im Kriege kleine Thürmchen, in welchen sich Soldaten befanden.

[9]Sie leben 100 bis 200 Jahre.

[10]Sie lieben besonders Wein und Branntwein, und haben an der Musik und an Blumen eine große Freude.

L'éléphant, le plus grand des animaux terrestres, parvient à quinze pieds de hauteur.

Autrefois les éléphants portaient à la guerre, des tourelles, où se trouvaient des soldats.

Ils vivent cent jusqu'à deux cents ans.

Ils aiment particulièrement le vin et l'eau-de-vie; la musique et les fleurs leur font un grand plaisir.

59

Multungula.

[1]Elephantus, maximus omnium animalium terrestrium, ad magnitudinem quindecim pedum accedit.

[8]Olim elephanti quoque in bello turriculas ferebant, militibus repletas.

[9]Centum vel ducentos annos vivunt.

[10]Vino et vino adusto imprimis delectantur, et musica ac floribus maxime gaudent.

SCHWEIZ. MUSEUM FÜR VOLKSKUNDE, BASEL

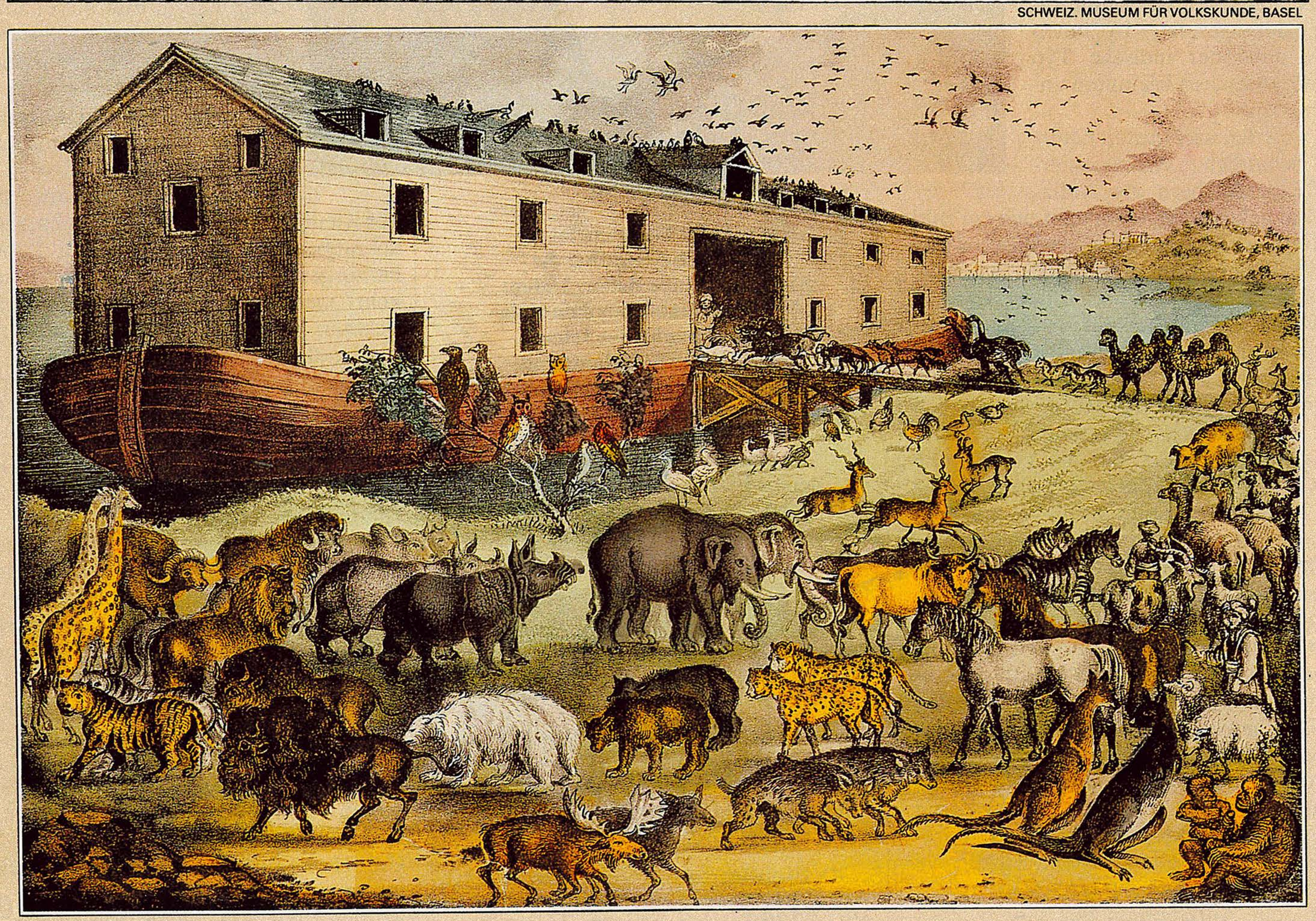
Above: Since "Orbis pictus", an illustrated book for young people, first appeared in 1658, the elephant has always been shown in it. (From an 1836 edition.)
Top right: The elephant among the beasts in Paradise; peepshow picture, c. 1760.
Bottom right: Biblical picture sheet with Noah's Ark, colour lithograph, c. 1880.

Oben: Seit 1658 das erste Jugendsachbuch, «Orbis pictus», erschienen war, gehörte immer auch der Elefant zu den aufgeführten Tieren. (Ausgabe von 1836.)
Rechts oben: Der Elefant unter den Tieren des Paradieses; Guckkastenbild, um 1760. Rechts unten: Biblischer Bilderbogen mit Arche Noah, Farblithographie, um 1880.

En haut: depuis que le premier livre instructif pour la jeunesse, «Orbis Pictus», a paru en 1658, l'éléphant a toujours fait partie des animaux présentés.
En haut à droite: l'éléphant parmi les animaux du paradis, image de stéréoscope, vers 1760.
En bas à droite: image biblique avec arche de Noé, lithographie en couleur, vers 1880.

Dr. Theo Gantner ist Leiter des Schweizerischen Museums für Volkskunde in Basel und Verfasser zahlreicher Publikationen zu Ausstellungen.

SCHWEIZ. MUSEUM FÜR VOLKSKUNDE, BASEL



SCHWEIZ. MUSEUM FÜR VOLKSKUNDE, BASEL

gen auch dreissig Männer.» Die markanten Holzschnitte geben das Wesentliche der äusseren Erscheinung erstaunlich richtig wieder, zutreffender als manche Werke der Nachfolgeausgaben, die sich der teuren Kupferstiche bedienten, welche eine detailliertere Darstellung ermöglicht hätten. In der letzten Nachahmung des mehrsprachigen Orbis-Pictus-Buchtypus von 1836 (Jacob Eberhard Gailer, Reutlingen; 1842 in 5. Auflage) wird der Elefant der Tiergruppe der «Plumpen Säugethiere» zugesellt, zusammen mit dem Flusspferd, dem Nashorn und dem Tapir. Die ihm in dieser Ausgabe zugesprochenen «menschlichen» Eigenschaften haben sich seit den mittelalterlichen Bestiarien nicht wesentlich geändert: Die Elefanten sind «klug und gelehrig… leben 100 bis 200 Jahre… Sie lieben besonders Wein und Branntwein, und haben an der Musik und an Blumen eine grosse Freude… Ehemals trugen die Elephanten im Kriege kleine Thürmchen, in welchen sich Soldaten befanden.»

In den seit dem 18. Jahrhundert parallel zu den Orbis-Pictus-Büchern erschienenen Anschauungsbilderbüchern und in den eigentlichen Naturkunde- und Realienbüchern hatte sich die zoologische Betrachtungsweise durchgesetzt. In ihnen wurde auch der indische Typ vom afrikanischen Elefanten unterschieden.

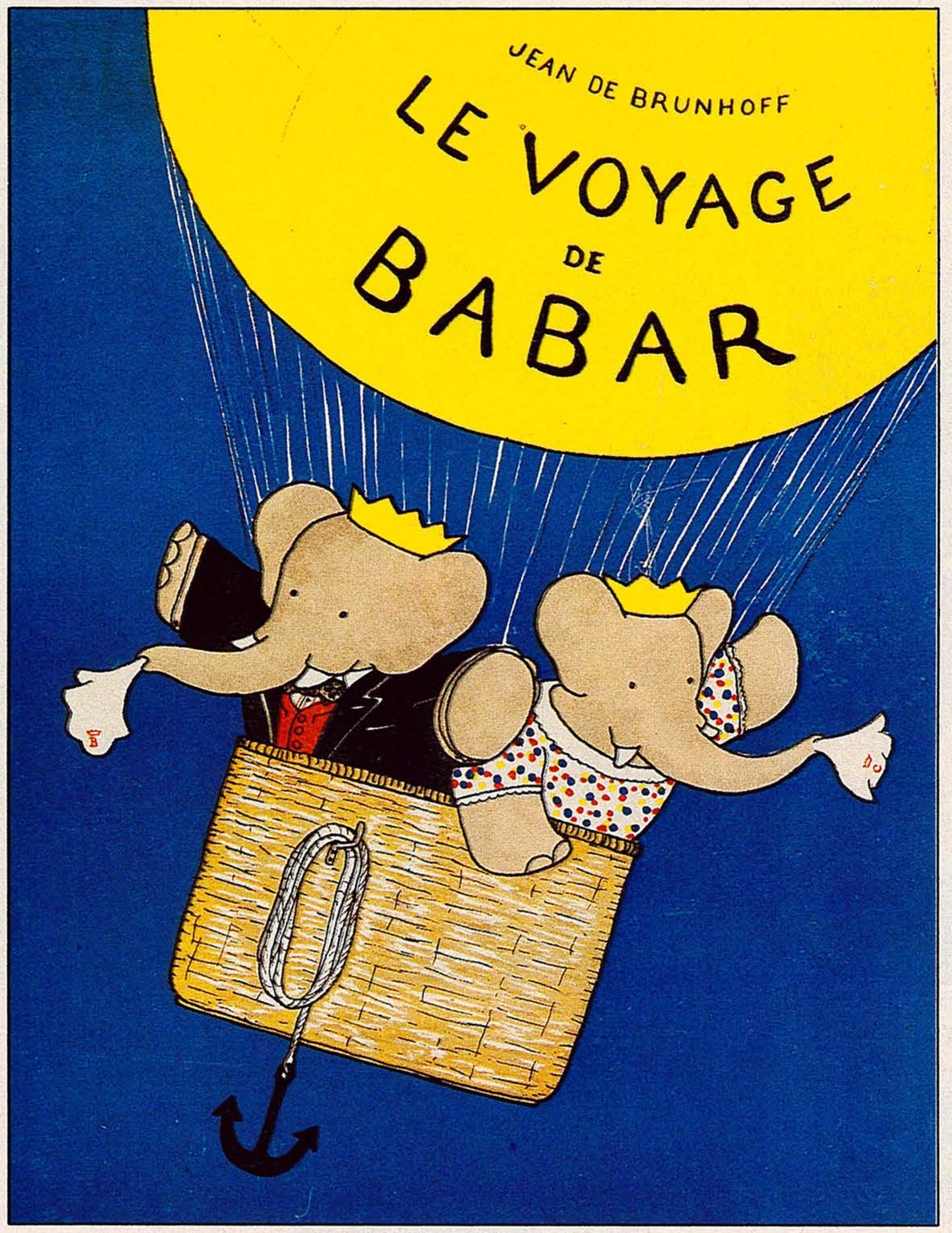
Da von den wichtigsten naturwissenschaftlich systematisierten Realienbüchern die Auflagenhöhe bekannt ist, kann man sich ein Bild von der Verbreitung des neuen Wissens machen. Seit der zweiten Hälfte des 19. Jahrhunderts ist das wissenschaftlich geprägte Bild vom Elefanten auch in die Schulbücher eingegangen. Daraus könnte man schliessen, dass seither die Vorstellungen über die Elefanten vorwiegend oder ausschliesslich vom erfolgreichen Naturkundeunterricht geprägt worden seien. Für die Vermittlung von Kenntnissen über die Tierwelt sind aber noch andere «Bildungsmittel» mindestens ebenso wichtig gewesen. Die religiösen Unterrichtsmittel wurden keineswegs ersatzlos durch die Realienbücher abgelöst. Ganz im Gegenteil. In den illustrierten Bibeln, den eigentlichen Bilderbibeln und den grossformatigen Bildwerken für den biblischen Unterricht ragen in Zahl und Ausgestaltung zwei Bildthemen heraus, die man als wichtige Vermittler von naturwissenschaftlichen Kenntnissen den Realienbildern gegenüberstellen muss: Die Bilder von der Erschaffung der Welt, insbesondere die Bilder vom Paradies und die Darstellungen vom Einzug der Tiere in die Arche Noah.

Seit dem Aufkommen der serienweisen Spielzeugproduktion, also etwa seit der Mitte des 18. Jahrhunderts, gehörten die beiden alttestamentlichen Darstellungen vom Paradies und von der Arche Noah zum Angebot der Hersteller. Es gab sie bald nicht nur als Holzfiguren in verschiedenen Grössen zu kaufen, sondern auch aus Papiermaché und aus Zinn gefertigt. Die zugehörigen Hintergründe wurden auf Papier gedruckt mitgeliefert. Unter den in Kupfer gestochenen Guckkastenbildern gab es Paradies- und Sintflut-Darstellungen, auf denen an bevorzugter Stelle immer auch Elefanten zu sehen waren. Arche- und Paradiesbilder wurden seit der zweiten Hälfte des 19. Jahrhunderts von Weihnachtskrippen auf Ausschnittbilderbogen abgelöst. Sowohl bei diesen Papierkrippen, als auch bei den dreidimensionalen Aufstellkrippen ermöglichten die Szenen mit den Drei Königen, neben den Kamelen auch Elefanten auftreten zu lassen. Dressierte Elefanten boten im letzten Jahrhundert Kindern und Erwachsenen eine grosse Sensation. Keine Bilderbogenmanufaktur liess sich die Darstellungen mit den Dickhäutern entgehen. Neben ernsthafter Belehrung im Stile der Naturkundebücher schien der «komische» Elefant für lustige Bildergeschichten besonders gut geeignet zu sein. Dass aber auch Erwachsene am komischen Elefanten eine besondere Freude hatten, zeigt sich in Inseraten und Werbeprospekten von Maskenverleihern, die seit der Jahrhundertwende Elefantenkostüme und Elefantenlarven im Angebot für Maskenbälle und Fastnachtsumzüge aufführten.

Elefanten scheinen speziell auf Kleinkinder eine eigentliche Faszination auszuüben. Ob diese durch Bilderbücher hervorgerufen worden ist oder ob umgekehrt mehrere Kinderbuchautoren mit der sicheren Wirkung von Elefantenbildern auf das kindliche Gemüt gerechnet haben, lässt sich nicht entscheiden. Zweifellos aber gehört die Geschichtenserie von der Elefantenfamilie Babar, erstmals 1931 von Jean de Brunhoff in Paris herausgegeben, zur Reihe der weitverbreiteten und häufig übersetzten Kinderbücher.

Unter den heute selbstverständlichen und weltweit anzutreffenden Kuscheltieren nimmt der Teddybär einen eigenen Rang ein. Im Ablauf der Spielpuppenentwicklung stellt das Plüschtier eine eigentliche Innovation dar, die nicht voraussehbar war. In der Reihenfolge der Beliebtheit unter den produzierten und gekauften Kuscheltieren folgen auf den Teddybär heute nicht etwa Pferde oder Kätzchen, sondern Kuschelelefanten. Bemerkenswert ist, dass die Geschichte der «Firma Margarete Steiff GmbH» im Jahre 1880 mit einem Filzelefanten begonnen hat. Bereits sechs Jahre später wurden über 5000 kleine Kuschelelefanten verkauft. Erst 1903 gab es den ersten Teddybär. Der weiche kleine Elefant ist also schon lange ein beliebtes Spielzeug. ○

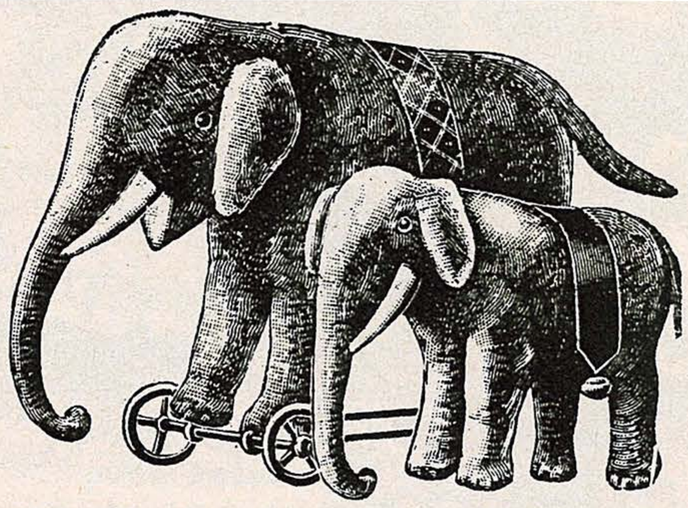
Above: Picture-books about the elephant family Babar have been appearing since 1931. Below: Toy elephants from the catalogue of the Jelmoli stores, Zurich 1916/17. Felt elephants were put on the market in 1880, long before the teddy-bear (1903).



SCHWEIZ. MUSEUM FÜR VOLKSKUNDE, BASEL

Oben: Seit 1931 erscheint die Bilderbuch-Serie über die Elefantenfamilie Babar. Unten: Spielzeugelefanten aus dem Katalog des Warenhauses Jelmoli, Zürich 1916/17. Elefanten aus Plüsch gab es bereits 1880, lange vor dem Teddybär (1903).

En haut: la famille Babar existe depuis 1931. En bas: éléphants du catalogue des Grands Magasins Jelmoli, Zurich 1916/17.



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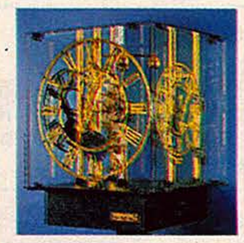

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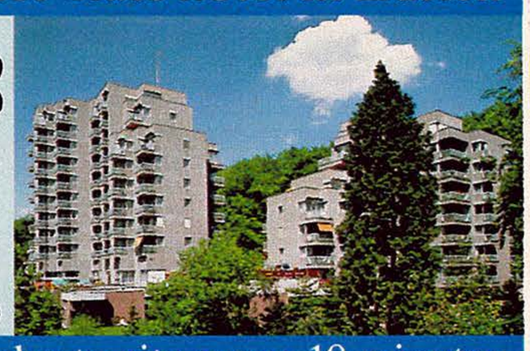

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«Walhalla» with continental cuisine
«Papa Leone» Italian food, home-made paste – Spaghetteria
«Subito» Pizzeria – Cafeteria
«Mexico Bar» Cocktail lounge

Hotel Stoller
Badenerstrasse 357, 8040 Zürich
✆ (01) 492 65 00
Centrally located first-class hotel. All rooms with color TV, radio, direct-dial telephone, minibar. Private garage. Classic French cuisine.
Rates: SglB Sfr. 95–125, TwB Sfr. 140–170, incl. American breakfast.

★★★

Hotel Alexander Garni
Niederdorfstrasse 40
✆ (01) 251 82 03 Tx 57735
Modern first-class hotel near Main Station and University. Rooms with bath or shower, air-conditioning, radio, telephone.

Hotel Basilea
Zähringerstrasse 25
✆ (01) 47 42 50 Tx 816468
The modern medium-class hotel. At a 5 minutes' walk from fly-rail (Zurich Main Station). All rooms with shower/WC. Single: Sfr. 74.– to 105.–. Double: 100.– to 143.–

Hotel Chesa Rustica
Limmatquai 70
✆ (01) 251 92 91/2/3
Modern hotel offering every comfort. Situated in the heart of the old town on the Limmat. Excellent cuisine and Fondue-Stube.
✆ (01) 251 92 91/2/3

City Hotel, Löwenstrasse 34
✆ (01) 211 20 55 Tx 812437
1st-class hotel near Main Station, Air-Terminal and "Bahnhofstrasse". Sound-proofed windows. All rooms TV, radio, direct-dial phone. Well-known Restaurant.

Hotel Florhof
Florhofgasse 4
✆ (01) 47 44 70
The quiet 17th-century house with every first-class comfort. Centrally located, near theatres, Art Gallery, University. Cosy restaurant. Parking.

Hotel Florida
Seefeldstrasse 63
✆ (01) 251 68 30 Tx 58481 Flori ch
Quiet central location near lake. All rooms TV, radio, direct-dial phone. Restaurant, bar, café, conference rooms. Garage and parking facilities. A gente fala portugues – Hablamos español.

Hotel Montana
Konradstrasse 39
✆ (01) 42 69 00 Tx 822640
Modern ***hotel, three min. walk to the main-station, all rooms with bath or shower, radio, direct dial phones, TV on request.

Hotel Du Théâtre
Centralplace, Seilergraben 69
✆ (01) 252 60 62 Tx 56853 the
Near Main Station, shopping, banks. All rooms with bath/shower, phone, radio/TV.

Zurich Airport

★★★★

Mövenpick Hotel
8152 Glattbrugg
✆ (01) 810 11 11 Tx 57979 mpha ch
5 minutes from Zurich Airport. Courtesy hotel bus 6.00 a.m. to midnight.
335 ultracomfortable rooms with queen-size beds, private bathroom, colour TV/Video, direct-dial telephones and minibar.
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Banqueting and conference rooms for 200–250.

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Hotel Welcome Inn
8302 Kloten
✆ (01) 814 07 27 Tx 825527wizk ch
Modern hotel, 100 sound-proofed rooms, courtesy bus to airport, 3 restaurants. Swiss management.

Zurich-Regensdorf

★★★★

Mövenpick Hotel
8105 Regensdorf
✆ (01) 840 25 20 Tx 825888
(Zurich north circular Motorway N20, exit Regensdorf/Affoltern)
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Geneva

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Hôtel Bristol
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✆ (022) 32 38 00 Tx 23739
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Double 230.– to 285.– Sfr
Juniorsuite 325.– Sfr

Hôtel La Réserve
✆ (022) 741 741 Tx 23822
Deluxe hotel, outstanding location on lake Geneva, unique 10-acres park with a superb outdoor heated swimming pool. 4 tennis courts and a private dock. The famous Chinese restaurant "Tsé Fung" and "La Closerie" the French restaurant, American-bar with musical ambiance. Conference and meeting facilities.

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Hôtel de Berne
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Reservation: Swissair Horis

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Hôtel Le Warwick
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Hôtel Astoria Tx 22307
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Bahnhofplatz 3–4
✆ (061) 22 55 66 Tx 962362
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Double, shower SFr 140.– to 165.–

Your Guide to Swissôtels in Zurich, Geneva, Basle, Berne, Montreux, and Lausanne.

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Hotel International
Am Marktplatz, 8050 Zurich
✆ (01) 311 43 41 Tx 823251
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Le PLAZA Hotel ***** Basel

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Hotel Le Plaza
Riehenring 45, 4058 Basle
✆ (061) 32 33 33
Tx 64439 plaza
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✆ (031) 22 45 81 Tx 911524
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HOTEL MONTREUX PALACE

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Hotel Montreux Palace
100, Grand-Rue, 1820 Montreux
✆ (021) 63 53 73 Tx 453101
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Hotel Lausanne Palace
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1002 Lausanne
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✆ (01) 211 60 50
Classical antiquities. Fine Icons.
Mon 14–18 h; Tue–Fri 9.30–13 h, 14–18 h; Sat 9.30–14 h.

Susi Brunner Gallery
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naïve – outsider – volkskunst neu: fiberarts

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Sibyll Kummer-Rothenhäusler
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Glasmalerei, Hinterglasmalerei
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Rämistrasse 8, ✆ (01) 47 50 40
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Koller am Hechtplatz
Schifflände 12, ✆ (01) 251 13 50
Oriental art, European porcelain.
Tue-Sat 10-12/14-18.30 (Sat -16) h.

Roswitha Haftmann
Rütistrasse 28, ✆ (01) 251 24 35
Anna Keel, from September 16th
Tue–Fri 14–18 h, Sa 11–15 h.

Jacqueline Kohler-Krotoschin
Beethovenstrasse 3
✆ (01) 202 15 03
Impressionist & 20th-Century Masters
By appointment

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Numismatics
In Gassen 20
✆ (01) 219 24 06
Coins – Medals – Auctions
Mon–Fri 8.15–16.45 h

Galerie Lopes AG
Beethovenstr. 7, ✆ (01) 201 14 14
Contemporary Masters
Mon–Fri 10–18 h
Sat by appointment

Galerie Lelong Zürich
Predigerplatz 10–12
✆ (01) 251 11 20
Bourgeois, Brus, Calder, Chillida, Kirkeby, Lam, Lüpertz, Magnelli, Miró, Nitsch, Penck, Rainer, Tàpies
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Galerie Nefer – Ancient Art
Augustinergasse 14
✆ (01) 211 48 05
Art and Archaeology of the Mediterranean
Mo–Fri 10–18 h, Sa 10–16 h

Numismatic Art & Ancient Coins
Weinbergstr. 164 ✆ (01) 363 37 23
Ancient Coins and Antiquities
Mon–Fri, 9–12 h., 14–17 h.

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Basle

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Lausanne

Fondation de l'Hermitage Lausanne – 2, rte du Signal
✆ (021) 20 50 01
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Tue–Sun 10–13 h, 14–18 h

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Thun/Berne

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Musée gallo-romain
Musée de l'Automobile
Toulouse Lautrec
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May 16th–November 1st 1987

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* for trade visitors only ᶜ combined with congress All dates subject to alteration

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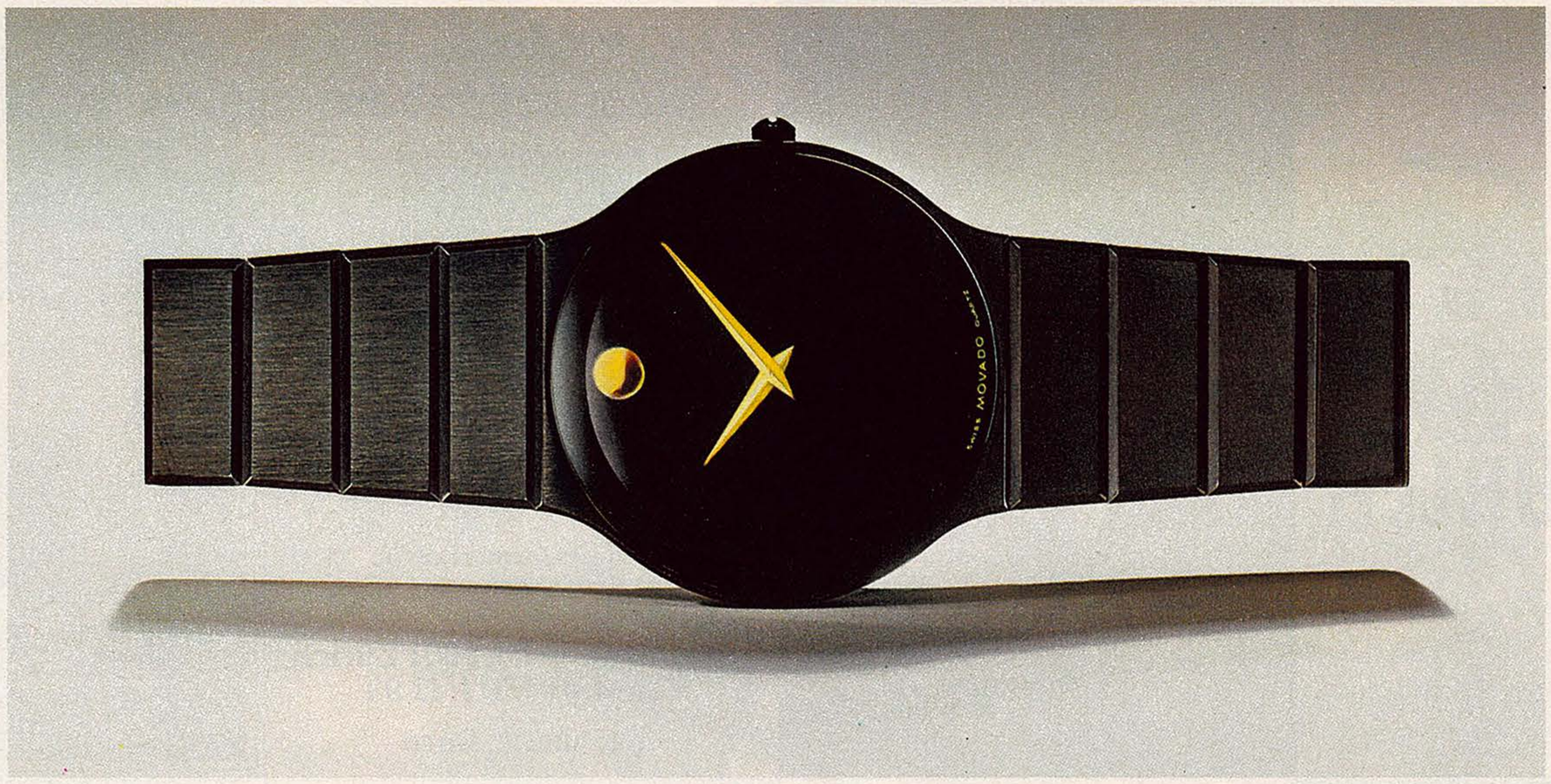

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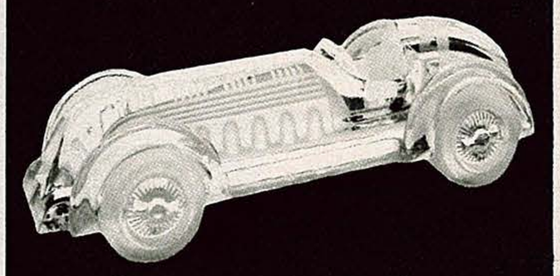

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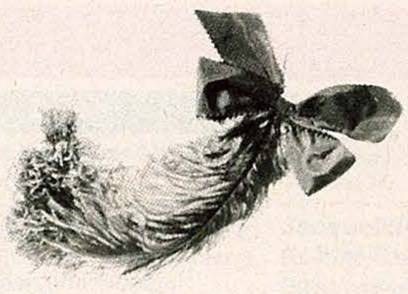

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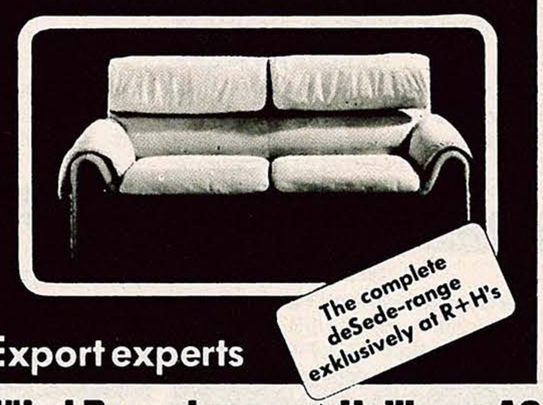

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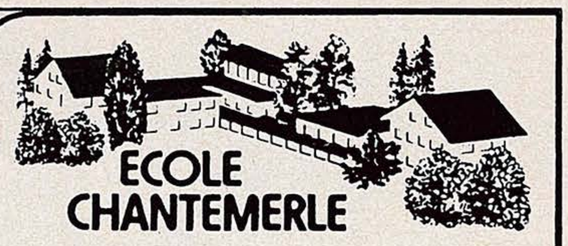

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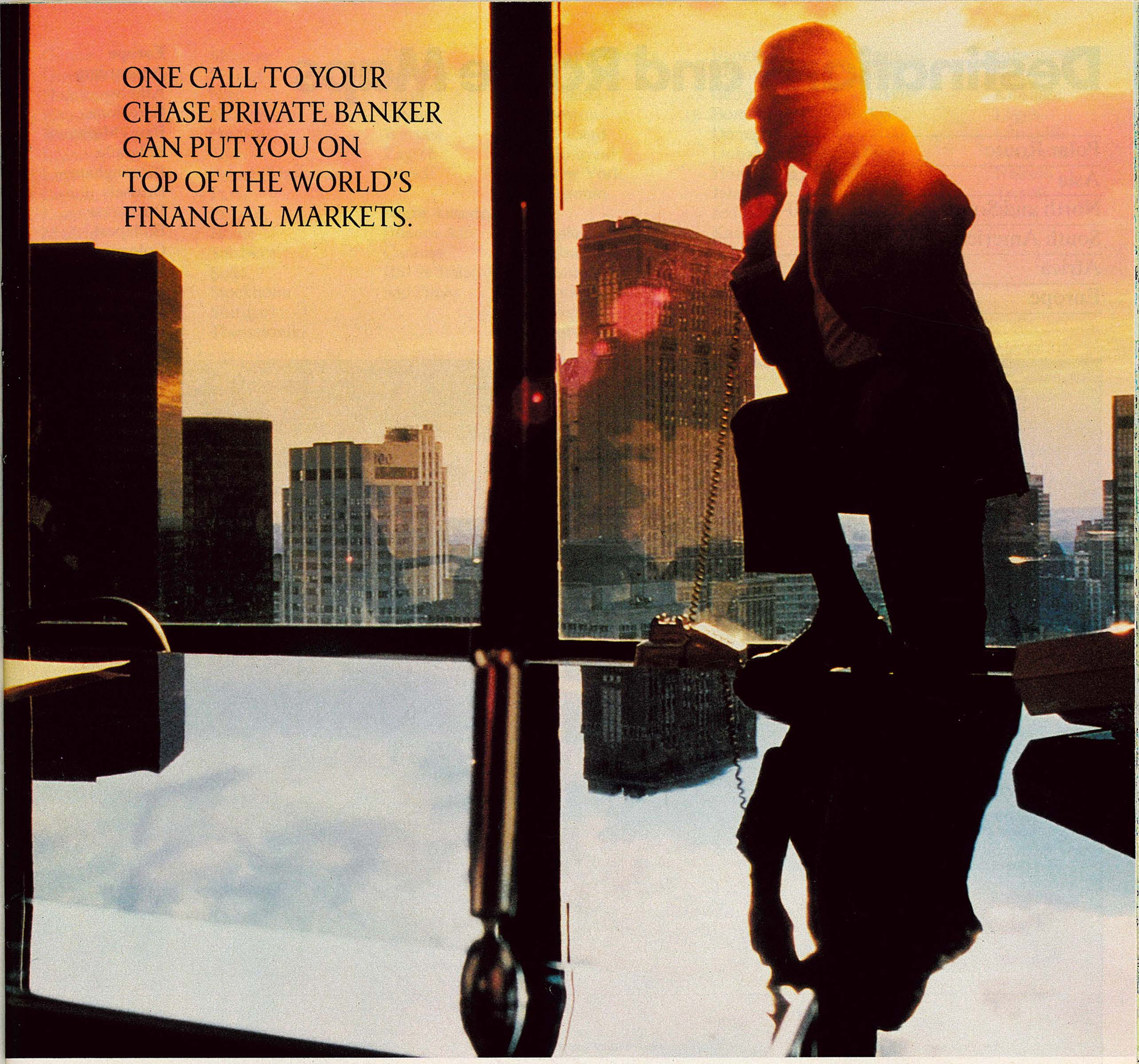

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Aldan
Vitim
Nizh Tunguska
Angara
Ob
Irtysh
Amur
Zeya
Selenga
Ussuri
Sungari
Mekong
Irrawaddy
Salween
Red
Yangtze
Huang He
Indus
Ganges
Brahmaputra
Tarim
Lake Baykal
Bratsk Reservoir
Aldan Plateau
Stanovoy Highlands
Stanovoy Ra.
Dzhugdzhur Ra.
Dzhagdy Ra.
Yablonovyy Ra.
Great Khingan Mts.
Lesser Khingan Mts.
Sikhote Alin Ra.
Eastern Sayan Mts.
Western Sayan Mts.
Altai Mts.
Altai Range
Khangay Range
Gobi
Inner Mongolia
Nei Mongol
Great Shantar I.
C. Yelizaveta
Okha
Nikolayevsk-na-Amure
Komsomol'sk-na-Amure
Sovetskaya Gavan
Aleksandrovsk-Sakhalinskiy
Pobedino
Poronaysk
Makarov
Ilyinskiy
Dolinsk
Yuzhno-Sakhalinsk
Nel'kan
Ayan
Tommot
Nizh. Kuranakh
Chagda
Topko
Aldan
Chul'man
Neryungri
Berkakit
Tynda
Bam
Bomnak
Chumikan
Ekimchan
Selemdzhinsk
Oktyabrskiy
Mayskiy
Norsk
Tahe
Svobodnyy
Belogorsk
Blagoveshchensk
Raychikhinsk
Obluch'ye
Birobidzhan
KHABAROVSK
Nenjiang
Aihui
Bei'an
Hegang
Jiamusi
Fujin
Yilan
Jixi
Hulin
Mudanjiang
Suifenhe
Spassk-Dal'niy
Dal'negorsk
Oblechnaya
Ussuriysk
Partizansk (Suchan)
Nakhodka
VLADIVOSTOK
Pos'yet
Najin
Ch'ŏngjin
Sŏngjin
Hŭngnam
Wŏnsan
Kaesŏng
Haeju
SEOUL
Samch'ŏk
INCH'ŎN
TAEJŎN
TAEGU
PUSAN
Ulsan
P'ohang
Kunsan
Chŏnju
KWANGJU
Masan
Mokp'o
Cheju
Cheju Do
Yŏsu
Pyŏngyang
Chinnamp'o
Sinŭiju
Namp'o
Haeju
Kaesŏng
Hamhung
Chŏngjin
Rashin
Chongjin
Tsushima
Iki
Fukuoka
Kitakyūshū
Shimonoseki
Kure
Hiroshima
Okayama
Matsue
Kobe
Osaka
Kyōto
Nagoya
Wakayama
Tokushima
Matsuyama
Takamatsu
Shikoku
Kyūshū
Kagoshima
Miyazaki
Oita
Kumamoto
Nagasaki
Sasebo
Hakodate
Aomori
Hachinohe
Morioka
Akita
Hirosaki
Yamagata
Ishinomaki
SENDAI
Niigata
Nagaoka
Iwaki
Toyama
Nagano
Mito
Kōfu
Gifu
Fukui
Kanazawa
Tottori
TOKYO
CHIBA
YOKOHAMA
Shizuoka
Hamamatsu
Honshū
Sapporo
Asahigawa
Otaru
Yubari
Kushiro
Muroran
Abashiri
Okhotsk
Nogliki
Okha
Great Shantar I.
C. Yelizaveta
Ayan
Sea of Okhotsk
Sakhalin
Gulf of Tartary
Sikhote Alin Ra.
La Pérouse Str.
Wakkanai
Terney
Amgu
Dal'nerechensk
Ussuri
Bikin
Fujin
Jiamusi
Yilan
Hulin
Jixi
Boli
Mudanjiang
Suifenhe
Ning'an
Dehui
Changchun
Jilin
Harbin
Songhu
Daqing
Anda
Baicheng
Horqin Youyi Qianqi
Tao'an
Fuyu
Qiqihar (Tsitsihar)
Arxan
Hailar
Bugt
Nonjiang
Manzhouli
Tamtsag Bulag
Choybalsan
Ulan Bator
Ondor Khaan
Kherelen Gol
Baruun Urt
Tsetserlig
Arbay Kheere
Mandal Gobi
Sayn Shanda
Dalan Dzadagad
Erenhot
Barkol
Hami
Turpan (Turfan)
Yanqi
Korla
Kuqa
Pik Pobedy
Aksu
Xingxingxia
Anxi
Yumen
Dunhuang
Lop Nor
Tarim
Sinkiang
Xinjiang
Kashi (Kashgar)
Shache (Yarkant)
Yecheng
Qiemo
Minfeng
Hotan
Ulugh Muz Tagh
Altyn Tagh
Tsaidam
Nan Shan
Qinghai Hu
Haiyan
Golmud
Dulan
Xining
Lanzhou
Ningxia Huizu
Wuwei
Zhongwei
Jiayuguan
Jinchang
Changyeh
Yinchuan
Wuhai
Baotou
Hohhot
Datong
Beijing
Tangshan
Qinhuangdao
Chengde
Zhangjiakou
Xuanhua
Huang He
Ruo Shui
Taiyuan
Shijiazhuang
Baoding
Wutai Shan
Ningwu
Yulin
Fenyang
Linfen
Yan'an
Yongji
Baishui
Pingliang
Longxi
Baoji
Tianshui
Luoyang
Zhengzhou (Chengchou)
Xuzhou (Hsuchou)
Xi'an (Hsian)
Xuchang
Huaiyang
Bengbu
Huainan
Qingjiang
Huaian
Nanjing (Nanking)
Yangzhou
Changzhou
Wuxi
Suzhou
Shanghai
Songjiang
Wuhu
Anqing
Hefei
Xinyang
Nanyang
Xiangfan
Hanzhong
Ank'ang
Wanxian
Yichang
Wuhan
Shashi
Enshi
Huangshi
Jiujiang
Hangzhou
Shaoxing
Ningbo
Jingdezhen
Jinhua
Linhai
Wenzhou
Changsha
Xiangtan
Zhuzhou
Zunyi
Shaoyang
Ji'an
Fuzhou
Lishui
Nanchang
Changde
Yibin
Chongqing (Chungking)
Neijiang
Luzhou
Guiyang
Duyun
Anshun
Hengyang
Shaowu
Ningdu
Nanping
Ningde
Fuzhou
Quanzhou
Zhangzhou
Xiamen
Shantou
Chao'an
Shaoguan
Guilin
Liuzhou
Wuzhou
Guangzhou (Canton)
Foshan
Jiangmen
Macau
Hong Kong
Kowloon
Victoria
Kaohsiung
Taichung
T'aipei
Chilung
T'ainan
Pingtung
Taiwan
Ryukyu Islands
Okinawa shima
Naha
Daito Is.
Amami Ō-Shima
Yaku-Shima
Kunming
Yuxi
Jinghong
Dukou
Lijiang
Zhaotong
Chang Jiang
Nanpan Jiang
Liupan Shui
Guangxi Zhuangzu
Nanning
Chongzuo
Pu'er
Lao Kay
Lashio
Kunlong
Bhamo
Myitkyina
Imphāl
Kohima
Shillong
Gauhāti
Dibrugarh
Saramati
Sadiya
Mt. Everest
Thimbu
Katmandu
Dhaulagiri
Gyangzê
Xigazê
Zangbo Jiang
Lhasa
Tanggula Pass
Nagqu
Nu Jiang
Qamdo
Garzê
Batang
Kangding
Yaan
Gonggo Shan
Mianyang
Chengdu
Neijiang
Yibin
Luzhou
Chongqing (Chungking)
Changde
Changsha
Xiangtan
Zhuzhou
Zunyi
Shaoyang
Ji'an
Fuzhou
Lishui
Nanchang
Jingdezhen
Jinhua
Linhai
Wenzhou
Ningbo
Shaoxing
Jiujiang
Huangshi
Shashi
Enshi
Yichang
Wanxian
Fengjie
Baishui
Yongji
Linfen
Yan'an

Territories
Hudson Bay
Saskatchewan
Manitoba
Ontario
Quebec
Alberta
British Columbia
Yukon
Mackenzie
Great Slave L.
Great Bear L.
Athabasca
Peace River
Churchill
Nelson
Saskatchewan
Red River
Winnipeg
Lake Winnipeg
Lake Manitoba
Lake Winnipegosis
Southampton Island
Coats Island
Mansel I.
Foxe Channel
Foxe Basin
Roes Welcome Sd.
Hudson Str.
Ungava Bay
James Bay
Akimiski I.
Belcher Is.
Labrador
Gulf of St Lawrence
Anticosti I.
Newfoundland
Nova Scotia
New Brunswick
Maine
Prince Edward I.
Sable Isl.
Bermuda Is.
Sargasso Sea
Gulf of Mexico
Caribbean Sea
Lesser Antilles
Greater Antilles
Hispaniola
Cuba
Jamaica
Yucatan
Florida
The Bahamas
Strait of Florida
Yucatan Channel
Bay of Campeche
Gulf of California
Gulf of Tehuantepec
Lower California
Western Sierra Madre
Eastern Sierra Madre
Mexico
Guatemala
Honduras
Nicaragua
Costa Rica
Panama
Panama Canal Zone
Colombia
Venezuela
Guyana
Suriname
Guiana Highlands
Los Llanos
Galápagos Islands
Clipperton I.
Cocos I.
Malpelo I.
Revilla Gigedo Is.
Ecuador
Peru
Brazil
Whitehorse
Ross River
Frances Lake
Watson Lake
Fort Liard
Fort Simpson
Fort Providence
Fort Resolution
Hay River
Rae
Yellowknife
Clinton L.
Reliance
Snowdrift
Rocher River
Nonacho L.
Aberdeen Lake
Baker Lake
Dubawnt Lake
Yathkyed L.
Chesterfield Inlet
Whale Cove
Eskimo Point
Roes Welcome Sd.
Vansittart I.
Nettilling L.
Nuwata
Foxe Pen.
Cape Dorset
Amadjuak L.
Frobisher Bay
Lake Harbour
Salisbury I.
Nottingham I.
Digges Is.
Ivujivik
Kovik Bay
Kangiqsujuaq
Povungnituk
Akpatok Island
Kangiqsuk
L. Payne
Inukjuak
Kuujjuaq (Fort Chimo)
Koksoak
L. Minto
L. à l'Eau Claire
Kuujjuaraapik
L. Bienville
Chisasibi
Eastmain
Fort Rupert
Otish Mts. 1128
Labrador City
Schefferville
Churchill Falls
Gagnon
Res. Manicouagan
Lake Mistassini
Chibougamau
Sept Iles
Port Cartier
Havre St. Pierre
Harrington Harbour
Natashquan
Baie Comeau
Gouin Res.
Roberval
Chicoutimi
Jadousssac
St. Lawrence R.
Riviere-du-Loup
Rimouski
Gaspé
Mont Joli
Gaspé Pen.
Bathurst
Newcastle
Pr. Edward I.
Moncton
Fredericton
St. John
Charlottetown
Sydney
Glace Bay
New Glasgow
Truro
Windsor
Halifax
Liverpool
Yarmouth
Bay of Fundy
C. Sable
Sable Isl.
Augusta
Portland
Bangor
Concord
Portsmouth
Manchester
Boston
Mass.
R.I.
C. Cod
New Bedford
Providence
Hartford
New Haven
Long Island
Montpelier
Burlington
Vermont
New Hampshire
Trois-Rivières
Levis
Québec
Montreal
Ottawa
Pembroke
St. Jean
St. Hyacinthe
Sherbrooke
Kingston
Oshawa
Toronto
Hamilton
Niagara Falls
Rochester
Syracuse
Utica
Albany
Troy
Binghamton
Watertown
Kingston
Sudbury
North Bay
Sault Ste. Marie
Marquette
Escanaba
Sault Ste. Marie
Hearst
Cochrane
Timmins
L. Abitibi
Thunder Bay
Nipigon
Fort Frances
Kenora
Sioux Lookout
Ennadai
Kasba L.
Nueltin L.
Selwyn L.
Uranium City
Stony Rapids
L. Athabaska
Fort Chipewyan
Fort Smith
Caribou Mts. 1006
Fort Vermilion
Peace River
Fort Nelson
Mt. Roosevelt 2972
2819 Churchill Pk.
McDame
Dease Lake
Telegraph Creek
Watson Lake
Whitehorse
Williston Lake
Bear Lake
Fort St. John
Hudson Hope
Dawson Creek
Hines Creek
Peace River
Mc Murray
Wollaston Lake
Cree L.
Reindeer Lake
Brochet
Churchill
Lynn Lake
Southern Indian L.
Port Nelson
York Factory
Nelson
Gillam
Thompson
Sherridon
La Ronge
Cumberland House
The Pas
Norway House
Prince Albert
North Battleford
Saskatoon
Lloydminster
Wainwright
Red Deer
Harina
Banff
Revelstoke
Kamloops
Kelowna
Nelson
Trail
Kimberley
Medicine Hat
Swift Current
Moose Jaw
Regina
Weyburn
Brandon
Pembina
Glasgow
Havre
Williston
Minot
Grand Forks
Devils Lake
Fargo
Jamestown
Bismarck
Glendive
Miles City
Billings
Livingston
Granite Pk. 3901
Yellowstone
Hardin
Missoula
Helena
Butte
Great Falls
Lethbridge
Calgary
Edmonton
Fort McMurray
Athabaska
Grande Prairie
Dease Lake
Mt. Robson 3954
Mt. Columbia 3747
Jasper
Williams Lake
Bella Coola
Mt. Waddington 4042
Fraser
Columbia
Okanagan L.
Shuswap L.
Arrow Lakes
Kootenay L.
Slocan L.
Kootenay
Flathead L.
Bitterroot Range
Clearwater
Salmon
Snake
Yellowstone L.
Yellowstone Park
Cloud Pk. 4016
Mt. Rainier 4392
Mt. St. Helens 2549
Mt. Baker 3285
Everett
Seattle
Tacoma
Olympia
Yakima
Walla Walla
Pasco
Lewiston
Columbia
Pendleton
Portland
Salem
Eugene
Oregon
Boise
Ontario
Burns
Twin Falls
Pocatello
Idaho
Wyoming
Casper
Rawlins
Great Salt Lake
Ogden
Salt Lake City
Provo
Rock Springs
Cheyenne
Laramie
Alliance
Valentine
Rapid City 2207
Pierre
Mobridge
Aberdeen
Huron
Sioux Falls
Yankton
Missouri
Mitchell
Mason City
Sioux City
Waterloo
Dubuque
Rockford
Madison
Green Bay
L. Michigan
Milwaukee
Chicago
Gr. Rapids
Kenosha
Lansing
Flint
Bay City
Saginaw
Detroit
Windsor
Toledo
Gary
South Bend
Fort Wayne
Akron
Canton
Cleveland
Erie
Buffalo
Rochester
Niagara Falls
Hamilton
London
Toronto
Oshawa
Kingston
Watertown
Syracuse
Utica
Albany
Troy
Binghamton
Scranton
Waterbury
Yonkers
Jersey City
Newark
Trenton
Philadelphia
New York
Long Island
Pennsylvania
Pittsburgh
Harrisburg
Allentown
Wheeling
Youngstown
Ohio
Columbus
Cincinnati
Dayton
Indianapolis
Terre Haute
Evansville
Louisville
Lexington
Huntington
Charleston
West Virginia
Virginia
Richmond
Lynchburg
Petersburg
Roanoke
Winston-Salem
Greensboro
Raleigh
North Carolina
Charlotte
Spartanburg
Greenville
Asheville
Chattanooga
Knoxville
Nashville
Tennessee
Memphis
Arkansas
Little Rock
Fort Smith
Jonesboro
Oklahoma City
Oklahoma
Tulsa
Joplin
Springfield
Missouri
St. Louis
Kansas City
Kansas
Topeka
Atchison
St. Joseph
Quincy
Springfield
Illinois
Peoria
Burlington
Davenport
Rock Island
Moline
Iowa City
Des Moines
Council Bluffs
Omaha
Lincoln
Nebraska City
Nebraska
North Platte
Alliance
Scottsbluff
Cheyenne
Laramie
Denver
Colorado Springs
Pueblo
Colorado
Grand Junction
Leadville
Aspen
Durango
Trinidad
Liberal
Dodge City
Wichita
Hutchinson
Salina
Topeka
Kansas City
Lawrence
Abilene
Ft. Worth
Dallas
Texarkana
Shreveport
Jackson
Monroe
Meridian
Tuscaloosa
Birmingham
Gadsden
Huntsville
Memphis
Nashville
Knoxville
Asheville
Chattanooga
Greenville
Spartanburg
Charlotte
Raleigh
Greensboro
Winston-Salem
Roanoke
Petersburg
Norfolk
Newport News
Richmond
Virginia
Kentucky
Lexington
Frankfort
Louisville
Evansville
Ohio
Wabash
Mississippi
Missouri
Arkansas
Red River
Louisiana
Alabama
Georgia
Atlanta
Augusta
Macon
Columbus
Montgomery
Albany
Dothan
Tallahassee
Pensacola
Mobile
Baton Rouge
New Orleans
Mississippi River Delta
Lake Charles
Beaumont
Houston
Port Arthur
Galveston
Austin
San Antonio
Waco
Palestine
Tyler
Abilene
San Angelo
Midland
Odessa
Pecos
Van Horn
El Paso
Las Cruces
Alpine
Del Rio
Eagle Pass
Piedras Negras
Laredo
Nuevo Laredo
Corpus Christi
Victoria
Brownsville
Matamoros
Monterrey
Saltillo
Torreón
Gómez Palacio
Durango
Chihuahua
Ciudad Obregon
Hermosillo
Guaymas
Navojoa
Culiacan
Los Mochis
Mazatlan
La Paz
C. Falso
S. José d.C.
San Quintin
Ensenada
Cedros
P. Eugenia
S. Rosalia
Guadalupe
Tijuana
Mexicali
San Diego
Oceanside
Yuma
Colorado
Phoenix
Mesa
Tucson
Douglas
Nogales
Cananea
Nacozari d.G.
Demino
Roswell
Clovis
Socorro
Amarillo
Lubbock
Wichita Falls
Albuquerque
Santa Fe
Gallup
Flagstaff
Prescott
Needles
Arizona
New Mexico
Las Vegas
Death Valley
Mt. Whitney 4418
Fresno
Bakersfield
Pasadena
San Bernardino
Anaheim
Long Beach
Los Angeles
Santa Barbara
Monterey
San Francisco
Stockton
Reno
Carson City
Austin
Eureka
Nevada
Utah
Provo
Salt Lake City
Ogden
Great Salt Lake
Winnemucca
Elko
Wells
Rawlins
Cheyenne
Laramie
Longs Pk. 4345
Grand Junction
Green River
Richfield
Cedar City
St. George
Durango
Colorado
Mt. Elbert 4399
Leadville
Aspen
Trinidad
Springer
Clayton
Roswell
Carlsbad
Midland
Odessa

Distances		Miles	Kilometers
Zurich	Atlanta	4681	7533
	Boston	3735	6011
	Caracas	5006	8056
	Chicago	4430	7129
	Geneva	144	232
	Montreal	3728	6000
	New York	3926	6318
Geneva	New York	3859	6210
Montreal	Toronto	312	502

swissair

Distances		Miles	Kilometers
Zurich	Caracas	5006	8056
	Geneva	144	232
Geneva	Rio de Janeiro	5683	9146
Rio de Janeiro	Buenos Aires	1232	1938
	São Paulo	228	367
São Paulo	Buenos Aires	1056	1700

10°

Distances		Miles	Kilometers
Zurich	Algiers	792	1275
	Athens	1012	1629
	Geneva	144	232
	Lagos	2842	4574
	Tripoli	1050	1680
	Tunis	738	1188
Geneva	Abidjan	2895	4659
	Algiers	676	1088
	Athens	1069	1720
	Cairo	1755	2824
	Casablanca	1145	1843
	Dakar	2569	4134
	Douala	2926	4709
	Jeddah	2523	4060
	Lagos	2745	4418
	Libreville	3170	5102
	Nairobi	3783	6088
	Tunis	683	1099
Abidjan	Accra	261	420
Athens	Khartoum	1633	2628
Dakar	Monrovia	752	1210
Douala	Brazzaville	688	1107
	Kinshasa	703	1131
Jeddah	Dar es Salaam	1961	3156
Lagos	Accra	250	402
Libreville	Kinshasa	534	859
Nairobi	Johannesburg	1810	2913

swissair

15° 10° 5° 0°

0 50 100 200 300 km
0 50 100 200 miles

ATLANTIC OCEAN

North Sea

English Channel

Irish Sea

Bay of Biscay

Mizen Hd. C. Clear
George's Chan.
St. St. David's Hd
Milford Haven
Fishguard
Cardigan Bay
Aberystwyth
Shrewsbury
Wolverh.
Stratford upon Avon
Hereford
Gloucester
Swansea
Merthyr Tydfil
Cardiff
Newport
Swindon
Bristol
Bristol Chan.
Barnstaple
Taunton
Bath
Salisbury
Reading
Oxford
Luton
Cambridge
Ipswich
Harwich
Colchester
Hoek van Holland
Barrow in Furness
Blackpool
Liverpool
Birkenh.
Chester
Crewe
Stoke on Trent
Derby
Nottingham
Leicester
Peterborough
Ely
King's Lynn
Norwich
Great Yarmouth
Lowestoft
Lincoln
Skegness
The Wash
Cromer
Sheffield
Leeds
Grimsby
Kingston upon Hull
Scarborough
Flamborough Hd
Whitby
Middlesbrough
Sunderland
South Shields
Newcastle u. Tyne
Berwick upon Tweed
Alnwick
Cheviot Hills
Hawick
Carlisle
Gateshead
Penrith
Kendal
Lancaster
Pennines
Whitehaven
Douglas
I. of Man
Solway Firth
Dumfries
Stranraer
Ayr
Glasgow
Edinburgh
Greenock
Firth of Clyde
North Chan.
Malin Hd.
Londonderry
Ballymena
Larne
Belfast
Portadown
Lough Neagh
Omagh
Donegal
Donegal Bay
Northern Ireland
Sligo
Ballina
Castlebar
Clifden
Galway
Galway Bay
Aran Is.
Athlone
Longford
L. Ree
Mullingar
Drogheda
Dundalk
Monaghan
Irish Sea
DUBLIN
Dun Laoghaire
Holyhead
Bangor
Snowdon
Lough Derg
Thurles
Tullamore
Ennis
Limerick
Dingle
Dingle B.
Tralee
Kilkenny
Arklow
Lugnaquilla
926
1041
Mallow
Clonmel
Cork
Bantry
(Corcaigh)
Dungarvan
Waterford
Wexford
Wales
Hebrides
Skye
1008
Mallaig
Ft.William
1343
Ben Nevis
Firth of Lorne
Oban
Stornoway
Butt of Lewis
C. Wrath
The Minch
Orkney Is.
Mainland
Kirkwall
Thurso
Durness
Duncansby Head
Wick
Helmsdale
Ardgay
Moray Firth
Kinnaird's Head
Elgin
Inverness
Stromeferry
1309
Scotland
Grampian Mts.
Fraserb.
Peterhead
Aberdeen
Forfar
Montrose
Arbroath
Dundee
Perth
Stirling
Kirkcaldy
Firth of Forth
Malin Hd.
F. of Clyde
Ayr
Dumfries
Stranraer
Carlisle
Solway Firth
Whitehaven
Douglas
I. of Man
Barrow in Furness
Blackpool
Liverpool
Birkenh.
Chester
Crewe
Stoke on Trent
Derby
Nottingham
Leicester
Peterborough
Ely
King's Lynn
Norwich
Great Yarmouth
Lowestoft
Lincoln
Skegness
The Wash
Cromer
Sheffield
Leeds
Grimsby
Kingston upon Hull
Scarborough
Flamborough Hd
Whitby
Middlesbrough
Sunderland
South Shields
Newcastle u. Tyne
Berwick upon Tweed
Alnwick
Cheviot Hills
Hawick
Carlisle
Gateshead
Penrith
Kendal
Lancaster
Pennines
Whitehaven
Douglas
I. of Man
Solway Firth
Dumfries
Stranraer
Ayr
Glasgow
Edinburgh
Greenock
Firth of Clyde
North Chan.
Malin Hd.
Londonderry
Ballymena
Larne
Belfast
Portadown
Lough Neagh
Omagh
Donegal
Donegal Bay
Northern Ireland
Sligo
Ballina
Castlebar
Clifden
Galway
Galway Bay
Aran Is.
Athlone
Longford
L. Ree
Mullingar
Drogheda
Dundalk
Monaghan
Irish Sea
DUBLIN
Dun Laoghaire
Holyhead
Bangor
Snowdon
Lough Derg
Thurles
Tullamore
Ennis
Limerick
Dingle
Dingle B.
Tralee
Kilkenny
Arklow
Lugnaquilla
926
1041
Mallow
Clonmel
Cork
Bantry
(Corcaigh)
Dungarvan
Waterford
Wexford
Wales
Hebrides
Skye
1008
Mallaig
Ft.William
1343
Ben Nevis
Firth of Lorne
Oban
Stornoway
Butt of Lewis
C. Wrath
The Minch
Orkney Is.
Mainland
Kirkwall
Thurso
Durness
Duncansby Head
Wick
Helmsdale
Ardgay
Moray Firth
Kinnaird's Head
Elgin
Inverness
Stromeferry
1309
Scotland
Grampian Mts.
Fraserb.
Peterhead
Aberdeen
Forfar
Montrose
Arbroath
Dundee
Perth
Stirling
Kirkcaldy
Firth of Forth
Malin Hd.
F. of Clyde
Ayr
Dumfries
Stranraer
Carlisle
Gateshead
Penrith
Kendal
Lancaster
Pennines
Whitehaven
Douglas
I. of Man
Solway Firth
Barrow in Furness
Blackpool
Liverpool
Birkenh.
Chester
Crewe
Stoke on Trent
Derby
Nottingham
Leicester
Peterborough
Ely
King's Lynn
Norwich
Great Yarmouth
Lowestoft
Lincoln
Skegness
The Wash
Cromer
Sheffield
Leeds
Grimsby
Kingston upon Hull
Scarborough
Flamborough Hd
Whitby
Middlesbrough
Sunderland
South Shields
Newcastle u. Tyne
Berwick upon Tweed
Alnwick
Cheviot Hills
Hawick
Carlisle
Gateshead
Penrith
Kendal
Lancaster
Pennines
Whitehaven
Douglas
I. of Man
Solway Firth
Dumfries
Stranraer
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Glasgow
Edinburgh
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Firth of Forth

Bergen
1862.
Geilo
Gol
Gjøvik
Mjøsa
Hamar
Malung
Honefoss
OSLO
Kongsvinger
Torsby
Leirvik
Hardangerfj.
Odda
1680
Rjukan
1883
Drammen
Lillestrøm
Haugesund
Sauda
Notodden
Telemark
Kongsberg
Arvika
Dalen
Bokna-fjorden
Stavanger
Sandnes
Egersund
Flekkefjord
Lindesnes
Mandal
Grimstad
Kristiansand
Arendal
Risør
Evje
Svenes
Skien
Porsgrunn
Larvik
Tønsberg
Horten
Moss
Ski
Ås
Frederikstad
Halden
Strømstad
Ed
Mellerud
Lidköping
Uddevalla
Lysekil
Trollhättan
Skövde
Falköping
Alingsås
Jönköping
Borås
Göteborg
Skagerrak
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Frederikshavn
Hjørring
Thisted
Limfjorden
Ålborg
Læsø
Varberg
Värnamo
Kattegat
Halmstad
Helsingborg
Helsingør
Landskrona
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Skagerrak
Kattegat
Sweden
Jutland
DENMARK
COPENHAGEN
Øresund
Göteborg
Borås
Jönköping
Skövde
Lidköping
Karlsborg
Karlstad
Säffle
Arvika
Kongsvinger
Lillestrøm
Hagfors
Koppaf
Vänern
Vättern
Mjøsa
Glomma
Oslofj.
Hardangerfj.
Bokna-fjorden
Telemark
Sandnes
Egersund
Flekkefjord
Lindesnes
Mandal
Grimstad
Kristiansand
Arendal
Risør
Evje
Svenes
Skien
Porsgrunn
Larvik
Tønsberg
Horten
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Ski
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Halden
Strømstad
Ed
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Uddevalla
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Netherlands
AMSTERDAM
Haarlem
Leiden
The Hague
Rotterdam
Dordrecht
Breda
Utrecht
Apeldoorn
Arnhem
Nijmegen
Rhine
Ijssel
Meppel
Zwolle
Emmen
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Oostende
Vlissingen
Hoek van Holland
Harwich
Colchester
Southend on Sea
Thames
Canterbury
Dover
Dunkerque
Calais
Boulogne-sur-Mer
Strait of Dover
Hastings
Portsmouth
I. of Wight
Bournemouth
Poole
Southampton
Brighton
Guildford
Crawley
Yeovil
Torbay
Start Point
Lyme B.
Exeter
Budeo
Plymouth
Falmouth
Lizard Pt.
Land's End
Is of Scilly
Newquay
Penzance
Cherbourg
C. de la Hague
Guernsey
Channel Is.
Jersey
Dieppe
Fecamp
Le Havre
Baie de la Seine
Deauville
Caen
Saint-Lô
Granville
Golfe de St-Malo
Morlaix
St-Brieuc
St-Malo
Brest
I. d'Ouessant
Pte. du Raz
Quimper
Loudéac
Rennes
Vannes
Lorient
Belle-Ile
Flers
Fougères
Argentan
Versailles
Alençon
Chartres
Châteaudun
Le Mans
Laval
Châteaubriant
Angers
St-Nazaire
I. de Noirmoutier
Ile d'Yeu
Nantes
Loire
Cholet
Saumur
Tours
Vierzon
Bourges
Nevers
Dijon
Besançon
Belfort
Vesoul
Epinal
Colmar
Freib.
Black Forest
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Vosges
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Saarlouis
Verdun-s.-M.
Châlons-sur-M.
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Hamburg
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Leeuwarden
Groningen
Oldenb.
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Wilhelmshvn.
Bremerhvn.
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Den Helder
Ijssel meer
Meppel
Zwolle
Diepholz
Nienburg
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Salzwedel
Stendal
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Wittenberge
Lüneburg
Soltau
Uelzen
Ludwigslust
Neustrelitz
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Geneva
Lausanne
Fribourg
Bern
Biel
Neuchâtel
Basel
Zurich
Luzern
Schwyz
Chur
Montreux
Jungfrau
St. Gotthard
St. Moritz
Sion
Brig
Rhône
L. Léman
Jura
Dole
Besançon
Belfort
Vesoul
Epinal
Colmar
Freib.
Black Forest
Rhine
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Geneva
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Aosta
Mte. Rosa
4634
Maggiore
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L. di Como
Bergamo
Brescia
Milan
Novara
Vercelli
Pavia
Cremona
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Istria
Trieste
Udine
Ljubljana
Villach
Bolzano/Bozen
Belluno
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Trento
L. di Garda
Vicenza
Mestre
G. di Venezia
Po
Ferrara
Rovinj
Pula
Rt. Kamenjak
Ravenna
Adriatic Sea
Rimini
Pesaro
Ancona
Macerata
Foligno
Perugia
Arezzo
Trasimeno
Tiber
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Cassino
Terracina
C. Circeo
Gaeta
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Tyrrhenian Sea
Sardinia
Cagliari
S. Pietro
Sant'Antioco
G. di Cagliari
C. Teulada
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Sanluri
Oristano
M. del Gennargentu
1834
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Sassari
Olbia
Porto Torres
Alghero
Sardene
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Grosseto
Orvieto
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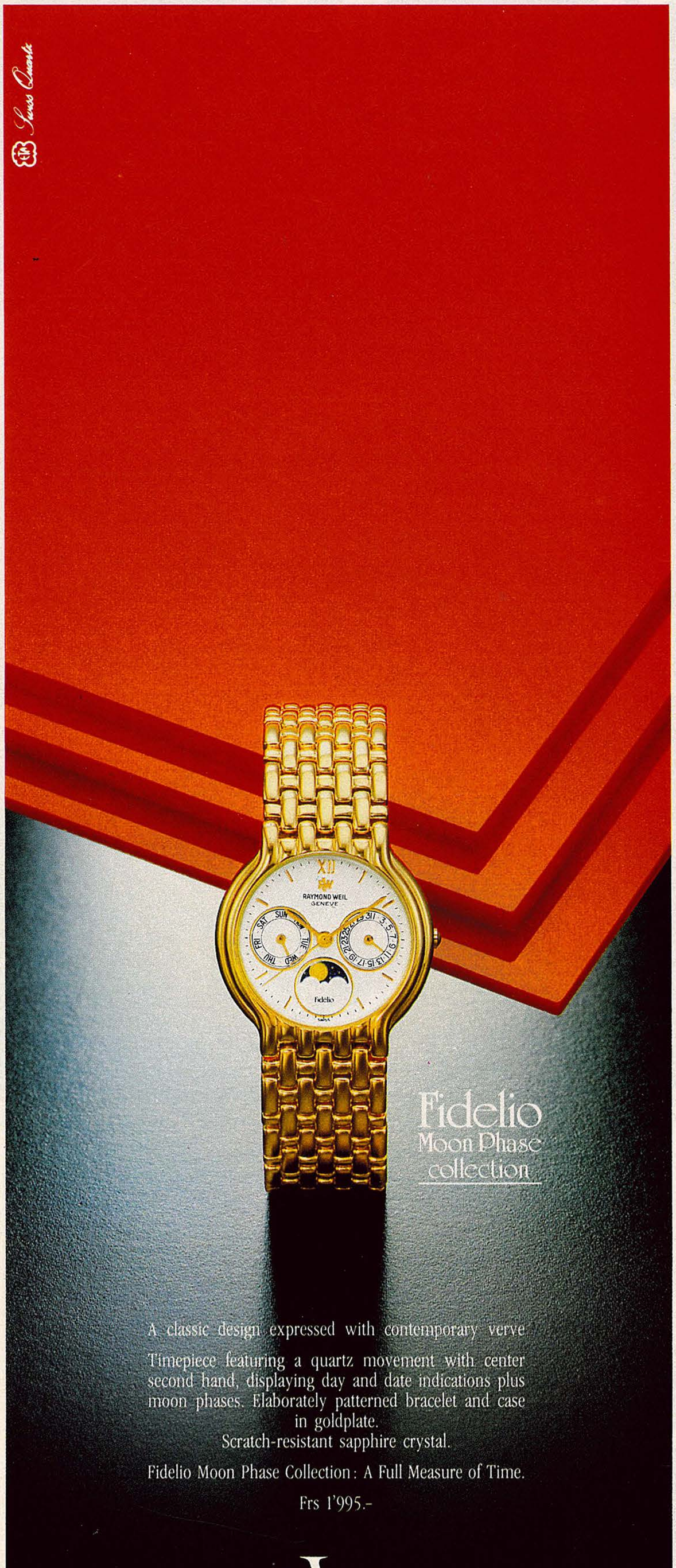

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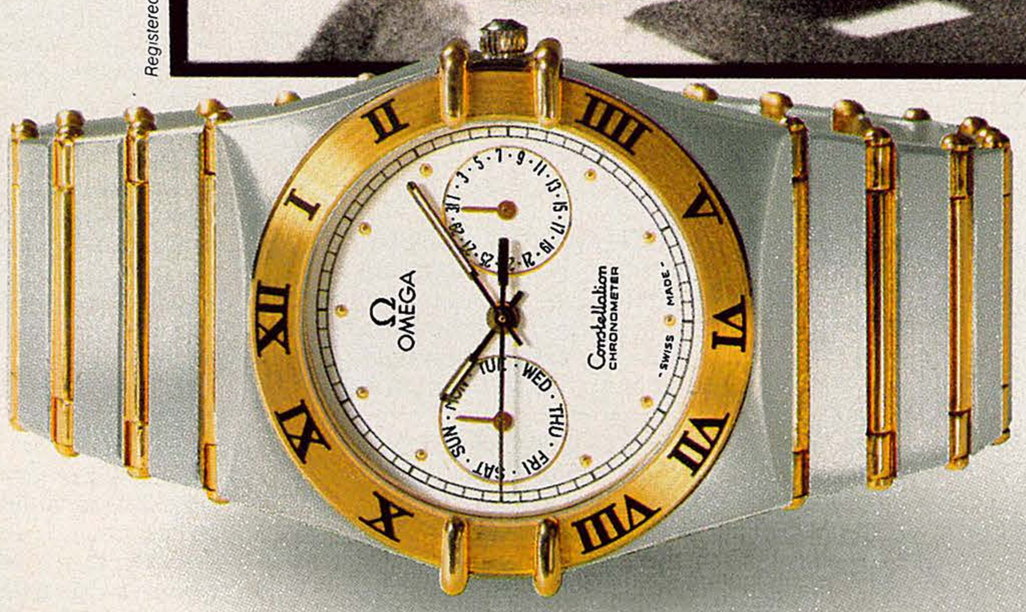

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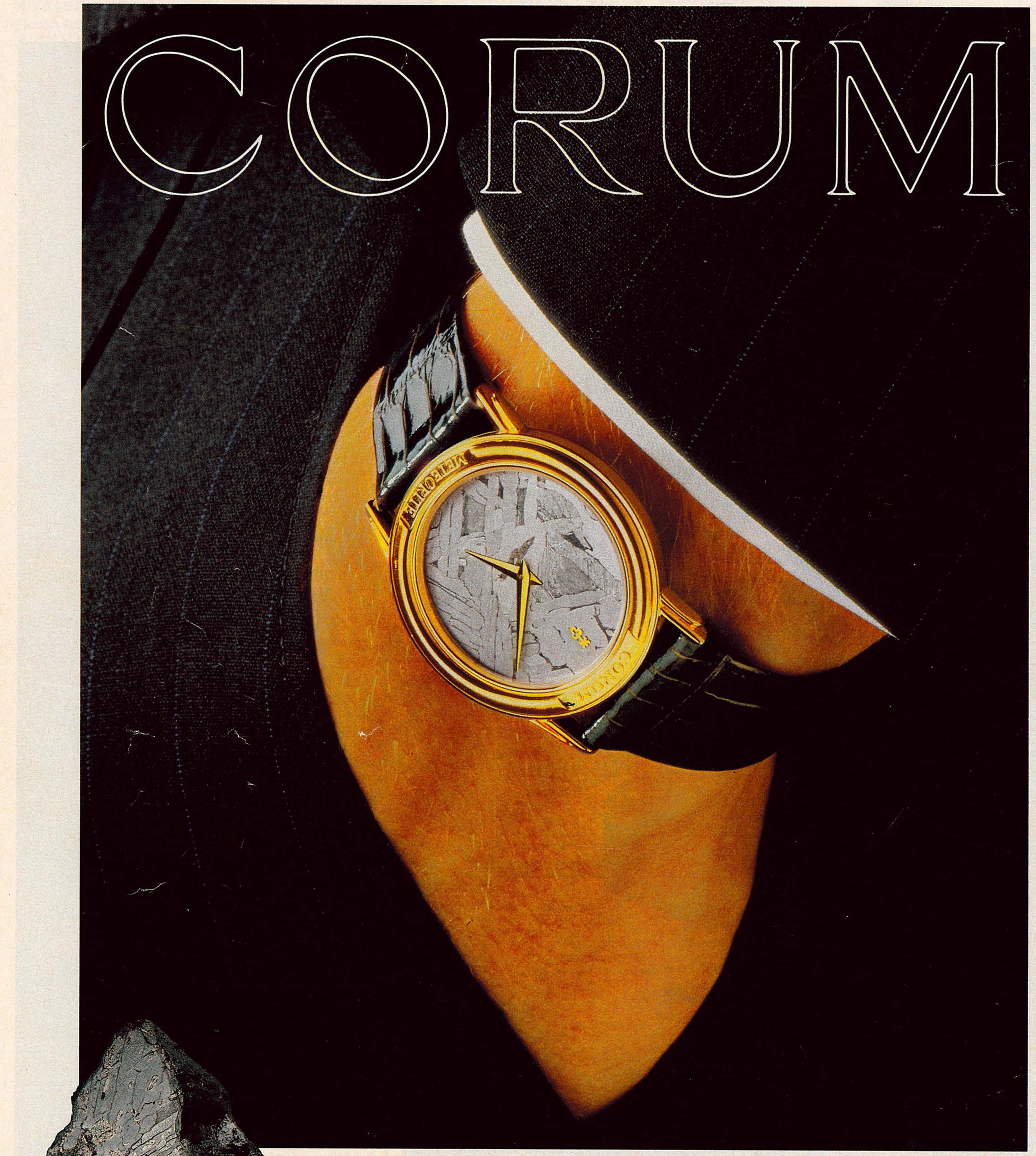

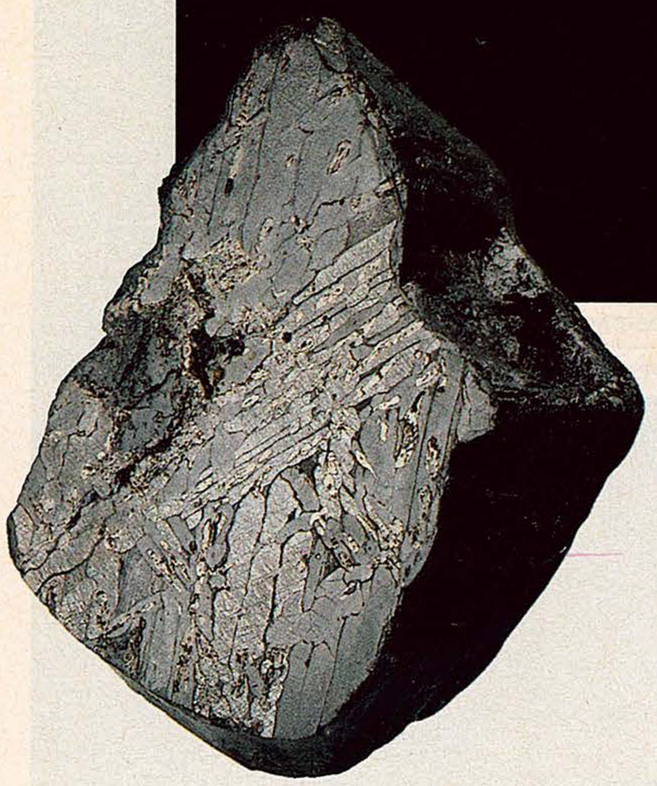

Wording engraved on the back of this model:

"METEORITE DIAL
OF COSMIC ORIGIN,
IMPACT POINT
35°3'N, 111°2'W,
ARIZONA"

Meteorite, a fragment of a star on your wrist. Sprung forth from the depths of the cosmos, scorched on entering the earth's atmosphere, then carved and polished by the hand of a craftsman, an incandescent meteor is transformed into a heavenly jewel and becomes an exclusive dial in a metal rarer than gold: a Corum watch, the "Météorite". A certificate giving the cosmic origin of the meteorite accompanies each model.

CORUM
SUISSE

Corum watches are on view at the finest jewellers. In Switzerland exclusively in Arosa: JÄGGI. **Ascona:** GIGON & BARRAS. **Bad Ragaz:** SCHERRAUS. **Basel:** GRAUWILER. **Reinach BL:** WAGNER. **Bern:** ZIGERLI & IFF. **Bienne:** BRÜDERLI. **Chur:** JÄGGI. **Davos:** MOMMERS. **Genève:** CLARENCE. **Genève airport:** WATCH SHOP. **Gstaad:** R. VILLIGER. **Interlaken:** P. W. EISENHART. **Klosters:** SCHAUERTE. **La Chaux-de-Fonds:** MAYER-STEHLIN. **Lausanne:** PIERRE GRUMSER, ROMAN MAYER. **Locarno:** ZENGER. **Lugano:** LES LIONS S.A. **Luzern:** ADAM. **Montreux:** CHRIST. **Schaffhausen:** FRANK HANNIBAL. **St. Gallen:** ENGLER. **St. Moritz:** EMBASSY. **Thun:** FRIEDEN. **Winterthur:** LAUENER. **Zermatt:** SCHINDLER. **Zug:** LAUENER. **Zürich:** BEYER. **Liechtenstein:** ADRIAN HUBER, **Vaduz.**

***For a brochure write to Corum, 2301 La Chaux-de-Fonds 04, Switzerland.**